2nd EDITION

MEDICAL TERMINOLOGY

The Best and Most Effective Way to Memorize, Pronounce and Understand Medical Terms

INCLUDES EXERCISES WITH ANSWERS

DAVID ANDERSSON

Medical Terminology

The Best and Most Effective Way to Memorize, Pronounce and Understand Medical Terms

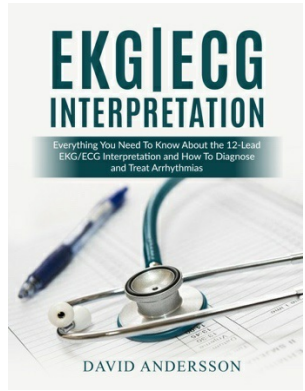
second edition

David Andersson

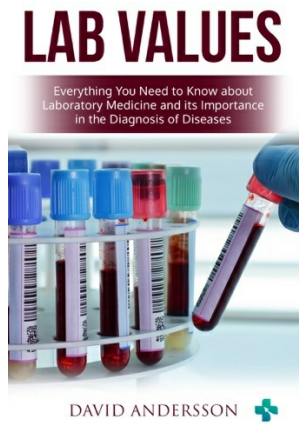
Medical Creations

Check Out our Other Books

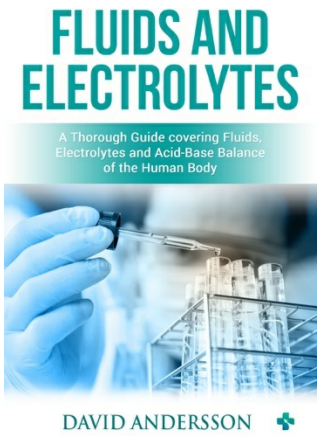
EKG/ECG Interpretation: Everything you Need to Know about the 12-Lead ECG/EKG Interpretation and How to Diagnose and Treat Arrhythmias


EKG|ECG
INTERPRETATION
Everything You Need To Know About the 12-Lead EKG/ECG Interpretation and How To Diagnose and Treat Arrhythmias
DAVID ANDERSSON

Lab Values: Everything You Need to Know about Laboratory Medicine and its Importance in the Diagnosis of Diseases


LAB VALUES
Everything You Need to Know about Laboratory Medicine and its Importance in the Diagnosis of Diseases
DAVID ANDERSSON

Fluids and Electrolytes: A Thorough Guide covering Fluids, Electrolytes and Acid-Base Balance of the Human Body


FLUIDS AND ELECTROLYTES
A Thorough Guide covering Fluids, Electrolytes and Acid-Base Balance of the Human Body
DAVID ANDERSSON

NEW!

SUTURE PRACTICE KIT

Medical Creations
SUTURE
PRACTICE KIT
for Medical, Nursing and Veterinary Students
LAST GENERATION MODEL
tested and improved by Medical Doctors
• Silicon Pad Designed to Mimic Human Tissue
• Professional Suturing Tools with Case Included
• Mixed Suture Thread Materials and Sizes Included
FREE EBOOK INCLUDED
SILK BRAIDED
NYLON MONOFILAMENT

Want to start practicing suturing?

Get your **Suture Practice Kit** **TODAY!**

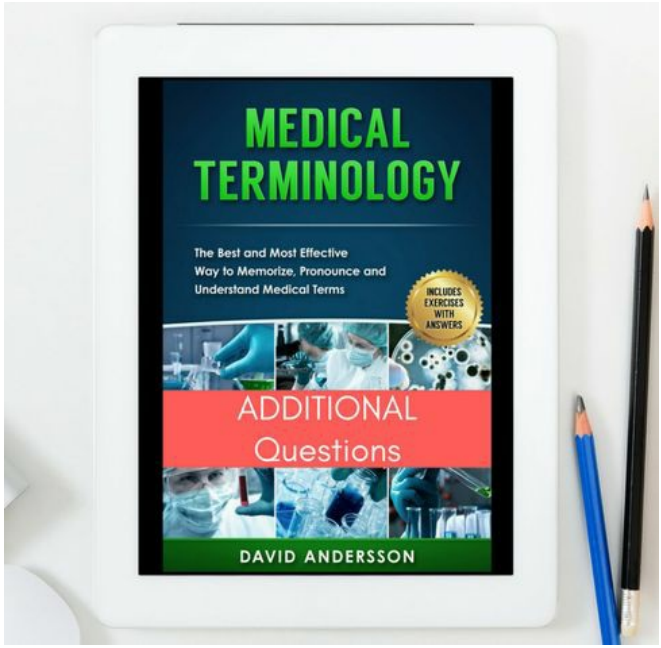
Apply this Discount code at checkout and **save $5**

3J5OJOXP

Click HERE

FREE WORKBOOK!

We are offering our ***Medical Terminology: Additional Questions*** ebook for FREE!



This ebook provides you with additional resources in the form of **additional questions with answers.**

To receive it just follow these steps:

1. Follow Us on Instagram @medicalcreationsofficial
2. Send us a DM on Instagram that says 'I want the Free Workbook'

Link to the page here:
Medical Creations Instagram

Table of Contents

Introduction

Chapter 1: The Importance of Learning Medical Terms

Benefits of Learning Medical Terms

1. It avoids medical errors
2. It provides easy documentation and standardized communication
3. It provides accurate diagnosis

Chapter 2: Understanding Medical Terms

A. Break Long Words Apart
B. Be Familiarized with Beginnings and Endings

Chapter 3: Root Words

Be Familiarized with Root Words as Well

Combine Beginnings, Roots, and Endings

External Root Words

Internal Root Words

Directional Root Words

Word Building Exercise

Chapter 4: Pronouncing Medical Terms

A. Sounds in Pronunciation
B. Sound Exercise

Chapter 5: Memorizing Medical Terms

A. Using Flashcards and Phone Apps
1. Word Flashcards
2. Phone Apps
B. Using Visual Reminders
C. Rewriting Medical Terms

Chapter 6: Prefixes and Suffixes

Learning Prefix, Root, and Suffix

1. Prefix – the Beginning
2. Suffix – the Ending
3. Root Word – the Middle
4. Word Combinations

The Most Important Prefixes

Medical Antonyms

Medical Synonyms

More Synonymous Prefixes

Prefixes Pertaining to Position and Direction

Prefixes for Numbers and Measurements

The Most Important Suffixes

Suffixes for Surgical and Diagnostic Procedures

Suffixes for Pathological Conditions

Grammatical Suffixes

Medical Terms Exercise

Chapter 7: Eponyms, Homonyms, and More

Eponyms

Acronyms

Abbreviations

Symbols

Chapter 8: Pluralizing Medical Terms

More Rules in the Medical Language

Chapter 9: The Structure and Organization of the Body

Body Positions

Body Regions

Body Cavities

Body Parts

Chapter 10: Terminology of Body Systems

Chapter 11: Answers

Chapter 12: Tips and Additional Resources

A. Tips
B. Additional Resources

Medical Creations Community

Conclusion

© Copyright 2016-2018 by DAVID ANDERSSON - All rights reserved.

This document is geared towards providing exact and reliable information in regards to the topic and issue covered. The publication is sold with the idea that the publisher is not required to render accounting, officially permitted, or otherwise, qualified services. If advice is necessary, legal or professional, a practiced individual in the profession should be ordered.

- From a Declaration of Principles which was accepted and approved equally by a Committee of the American Bar Association and a Committee of Publishers and Associations.

In no way is it legal to reproduce, duplicate, or transmit any part of this document in either electronic means or in printed format. Recording of this publication is strictly prohibited and any storage of this document is not allowed unless with written permission from the publisher. All rights reserved.

The information provided herein is stated to be truthful and consistent, in that any liability, in terms of inattention or otherwise, by any usage or abuse of any policies, processes, or directions contained within is the solitary and utter responsibility of the recipient reader. Under no circumstances will any legal responsibility or blame be held against the publisher for any reparation, damages, or monetary loss due to the information herein, either directly or indirectly.

Respective authors own all copyrights not held by the publisher.

The information herein is offered for informational purposes solely, and is universal as so. The presentation of the information is without contract or any type of guarantee assurance.

The trademarks that are used are without any consent, and the publication of the trademark is without permission or backing by the trademark owner. All trademarks and brands within this book are for clarifying purposes only and are the owned by the owners themselves, not affiliated with this document.

Introduction

I want to thank you and congratulate you for downloading the ebook, *"Medical Terminology: The Best and Most Effective Way to Memorize, Pronounce and Understand Medical Terms"*.

What did the doctor say? What did the patient say? What did the professor say? What's going on?

These are only few of the questions that people ask when faced with jargon-filled medical conversation in hospitals, schools, clinics, homes, and even at work. This book contains proven steps and strategies on how to understand, pronounce, and memorize medical terms, by using various methods. It also has tips and strategies to help you apply these methods.

Thanks again for downloading this ebook, I hope you enjoy it!

Chapter 1: The Importance of Learning Medical Terms

Medical terminology is the language used by medical professionals worldwide. It is universal to the medical and healthcare industry as it helps providers to completely understand what help a patient needs, or what is happening to the patient. It is important for nurses, doctors, other medical professionals, and medical students to be familiar with this language. Nowadays, with new medical professionals entering the industry, such as medical coders or transcriptionists and medical billers, learning medical terms is even more important. There is a high risk of improper management due to miscommunication between medical workers and patients, which can occur if workers do not know or use the correct medical terms.

At home or in clinics, knowing the right medical terms can prevent confusion and panic. Individuals who are familiar with medical terms can better understand their doctor and other medical professionals, especially in cases where medical procedures are required. In schools or universities, a better knowledge of medical terms can help students pass their exams.

In hospitals and in the medical field in general, medical terms make clinical proceedings easier because medical professionals can understand each others jargon. This works better for the patient's benefit, as it allows every person involved in the process of care to carry out their duties more efficiently.

Doctors often use different medical terms interchangeably. Depending on the context and situation, the terms could have different definitions.

Medical terms accurately describe the treatment that patients need to undergo and the conditions that they suffer from. Without proper knowledge of terms, communication between medical professionals may get confusing and in the end, patients might not get proper treatment. This would show that medical professionals are no longer effective in their job. Understanding medical terms, using them properly, and knowing their context has its benefits.

A. Benefits of Learning Medical Terms

1. It avoids medical errors.

Not properly documenting patients' medical records can get medical professionals in trouble. It can even put patients at bigger health risks. Medical records contain details that can help medical professionals diagnose patients more accurately, and thereby provide them with the right treatment. These records are packed with medical terms that help describe medical history of patients. For example, a doctor can avoid using certain medication on a particular patient if it is known from the patient's medical records that the patient has had a history of adverse allergic reactions to those drugs.

According to two major studies by the National Academy of Medicine, there are 44,000 to 98,000 deaths each year due to medical errors. These medical errors can range from wrong-site surgery and surgical injuries, improper transfusions and adverse drug events, restraint-related injuries or death, mistaken patient identities, falls, pressure

ulcers, burns, and suicides. Another medical error, medication error, has emerged within the past 15 years and it claims around 7,000 deaths each year.

If all medical professionals receive proper medical terminology training, these deaths can be avoided.

2. It provides easy documentation and standardized communication.

Most of the time, medical terms are represented by abbreviations, which are used in medical records for documentation. Abbreviations are used because, if medical terms are translated into laymen's terms, documentation can become laborious. Fortunately, medical terms are standard, and therefore, can be understood by all medical professionals, even when they are in abbreviations.

3. It provides accurate diagnosis.

Standardized medical terms also help medical professionals understand their patients' medical condition. This helps them interpret complex information, and enables them to diagnose patients more accurately. It basically helps them answer the following questions:

- Why is the patient seeking medical help?
- What kind of treatment and care is needed to help the patient?

Being in, and studying for the medical industry has many benefits. It also has a lot of responsibilities and one of these is to learn, understand, and pronounce medical terms properly.

Chapter 2: Understanding Medical Terms

A. Break Long Words Apart

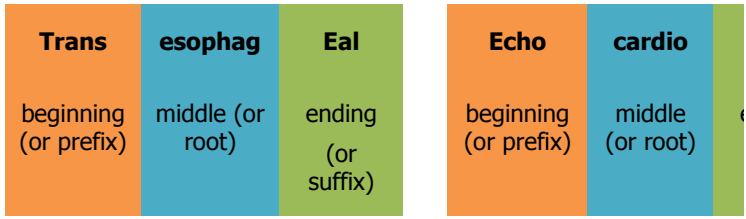
Medical terms may seem like a foreign language at first glance. The words are usually long and can be confusing. The key to understanding such terms is to focus on their components, specifically on their prefixes, roots, and suffixes. The list of medical terms is very long. Knowing the meaning of only a few components can help understand and interpret a long list of medical terms. Let's figure out how this is done.

Majority of medical terms are made up of multiple parts. Breaking them apart makes it easier to understand single, long words. Long medical words consist of the following components:

Beginning	Middle	Endin
prefix	**root**	**Suffi**
can be about shape, size, direction, or color	is often part of the body	can be about thing as the b or it can be test or it can c proble

A good example of a medical term to break apart is:

Transesophageal Echocardiogram



Medical terms do not necessarily have a beginning or ending. Sometimes parts of words appear in different components or places. For example, the word cardio used in the example above, is also in the medical terms myocardial and cardiologist, though they appear in different places. Why and how this happens will be discussed in detail later.

A. Be Familiarized with Beginnings and Endings

Beginnings and endings vary in purpose and use. Here are some of the most commonly used words for medical terms beginnings and endings:

Purpose	Beginning/Ending Words	Description
About size	Macro	large
	Micro	small
	Megalo or megaly	Very large
About where	Peri	around
	Trans	across
	Endo	within or inside
	Inter	between
About color	Chloro	Green
	Leuk	White
	Eryth	Red
	Cyan	Blue
About problems	Dys	not working correctly/normally
	Mal	Bad
	Emia	blood condition
	Itis	Inflammation

	Osis	condition or disease (usually non-inflammatory)
	Pathy	Disease
General use	Hyper	above normal
	Hypo	below normal
	Tachy	Fast
	Brady	slow

Some of commonly used beginnings and endings about tests and procedures:

Purpose	Words	Descripti

	Beginnings	
	Echo	ultrasonic waves
	Electro	electricity
	Endings	
About tests and procedures	Ectomy	removal of
	Gram	picture
	graph or graphy	process of taking picture
	Otomy	making a cut in/removing a pa
	Scopy	use of instrumen viewing
	Stomy	create an openin
	Plasty	modifying the sh of/repairing

Some of commonly used endings about specialists and specialties:

Purpose	Ending Words	Description
About specialties and specialists	Ology	study of a part of t body
	ologist	a specialist working specific part of the or a specific diseas
	iatry	medical treatment
	Iatrist	a specialist providir specific treatment

Chapter 3: Root Words

Be Familiar with Root Words as Well

Usually, the root of a medical term is a body part. Using the example described in the previous chapter, cardio is the root of echocardiogram. It means heart. Here are some most commonly used word roots from the medical vocabulary:

Body Part	Root Word	Group
veins and arteries	vas or vasc	Cardiovascu system
blood	hem or hemo or sangu	
blood vessels	angi or angio	
veins	ven or veno or phleb or phlebo	
aorta	Aort	
arteries	arteri or arterio	
brain	Enceph/ Ceph	parts of the h
nose	Rhino	
eardrum	tympan or myringo	
tooth	odont or dento	
skull	Crani	

eye	ophthalm or oculo	
ear	Oto	
tongue	Lingu	
liver	hepat or hepato	organs in th digestive syst
gallbladder	Cholecyst	
esophagus	esoph or esopha	
large intestine	Colo	
stomach	gastr or gastro	
small intestine	Ileo/duodeno/jejuno	
muscles	Myo	muscles and b
shoulder	Scapula	
arm	brachi or brachio	
wrist	carp or carpo	
rib	cost or costo	
back	Dorsa	
bones	oste or osteo	

foot	pod or podo or ped or pedo	
chest	thorac or thoraco	
lung	pneumo or pleura	
breast	mamm or mammo	rest of the bo
blood clot	thromb or thrombo	
kidney	Neph	

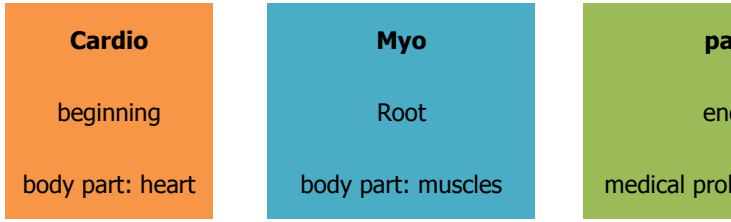
Tip: Group them into body parts, so it’s easier to remember.

Combine Beginnings, Roots, and Endings

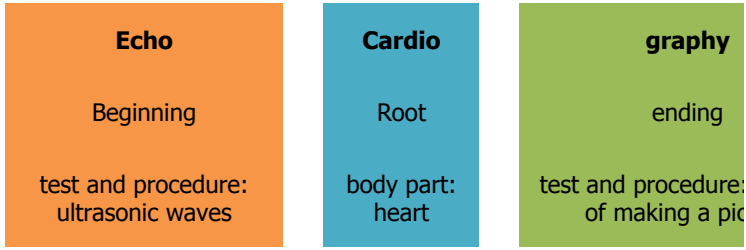
Now let's see how to put those beginnings, roots, and endings together. Use the tables above as guides. Let's use the word cardio as an example.

Cardi + itis = inflammation of the heart

Cardi + ology = study of the heart



Cardio + myo + pathy = disease of the heart muscle

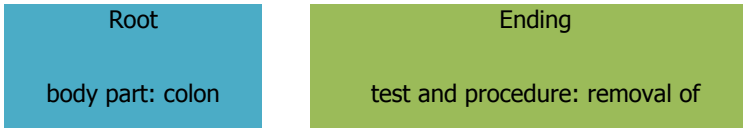


Echo + cardio + graphy = taking a picture of the heart using ultrasonic waves

Another example is the word colo or colon.

Colo + stomy = creating an opening in the colon.

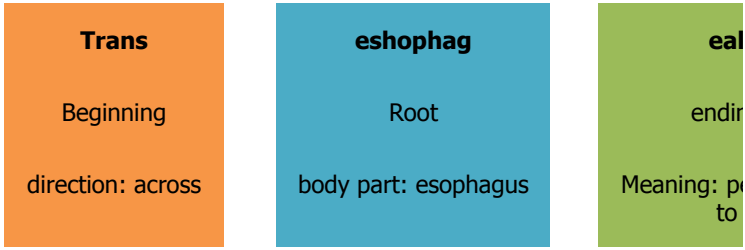
Colo + itis = inflammation of the colon



Colo + ectomy = removal of the colon

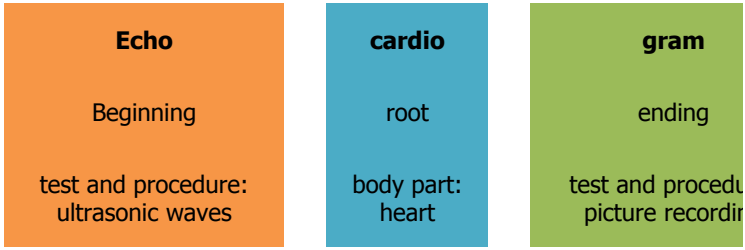
Going back to the first example, Transesophageal Echocardiogram, let's divide the words per set.

Set 1: Transesophageal



Trans + esophag + eal = going across the esophagus

Set 2: Echocardiogram



Echo + cardio + gram = recording a picture of the heart using

ultrasonic waves

Therefore, Transesophageal + Echocardiogram = a procedure where a patient swallows a tube that goes across the esophagus to record a picture of the heart using ultrasonic waves.

It also helps to know whether the root word refers to an internal or an external part of the body.

External Root Words

In the following table, you'll find the most common root words concerning the **outer** part of the body and its functions.

Exterior Root Word	What it Pertains to	Example	Meaning
Acr/ Acro	the extremities	**Acro**megaly	abnormally larg upper and lowe extremities (ha feet, etc.) brou about by an increased prod of growth horm
Axill/ Axillo	the armpits	**Axill**ary	pertaining to th axilla Hence, **Axill**ar lymphadenopat the enlargemer diseased lymph nodes in the ax characterized b swollen armpits
Blephar/ Blepharo	the eyelid	**Blepharo**plasty	the surgical rep the eyelid
Brachi/ Brachio	the arm	**Brachi**algia	severe pain in t arm
Bucc/ Bucco	the cheek	**Bucc**al	means anythin relating to the Hence, Buccal

			mucosa refers t interior lining o cheek.
Canth/ Cantho	angle of the eyelids	**Cantho**tomy	minor procedur where incision tissues at the a of the eye is performed to re pressure in orb compartment syndrome, or t access to the b orbit.
Capit/ Capito	the head/ shaped like a head	**Capit**ate bone	the largest han bone at the cen the wrist that is shaped like a rounded head.
Carp/ Carpo	the wrist	**Carpo**ptosis	a condition characterized b paralyzed exter muscles of the and the fingers
Caud/ Caudo	the hind part/ tail/ downward	**Caud**al anesthesia	anesthesia perf by injecting a l anesthetic agen the lower end c sacrum and coc (tail bone) This provides p relief from the umbilical (nave region and belo
Cephal/ Cephalo	the head	**Cephalo**hematoma	Occurring in inf it pertains to a traumatic, solid clotting of bloo

			takes place ber the inner skin c newborn's head It does not affe brain cells, but does bring abo pooling of bloo the injured bloo vessels, which between the ba skull and the in layers of the sk
Cervic/ Cervico	the neck, such as of the body, or of the uterus (which is also called cervix)	**Cervico**genic headache	refers to a seco headache brou about by a lesi an injury in the (cervical spine)
Cheil/ Cheilo/ Chil/ Chilo	the lips	**Cheilo**sis	inflamed lip co accompanied b redness, scalin cracking of the mouth corners This may be ca by Candida inf or vitamin deficiencies.
Cheir/ Cheiro/ Chir/ Chiro	the hand	**Cheiro**pompholyx	severely itchy s eruptions on th sides of the fin and the palms, up of small blis
Cili/ Cilio	eyelid, eyelash, relating to the eyelid or the	**Cili**ary muscle	a smooth musc situated in the layer of the eye

	eyelash		It regulates accommodation viewing things different distan is also responsi controlling the of the aqueous humor
Derm/ Derma/ Dermato/ Dermo	the skin	**Derma**titis	inflammation o skin, caused by allergy
Dors/ Dorsi/ Dorso	back part/ posterior	**Dorsi**flexion	the backward bending of the or the hand
Faci/ Facio	the face	**Facio**scapulohumeral Muscular Dystrophy	is a rare inherit disorder, which begins by affec the skeletal mu of the face It then proceed affect the shou (scapula), and upper arms (humeral). It involves the progressive weakening of t skeletal muscle these areas.
Gingiv/ Gingivo	the gums	**Gingiv**itis	Inflammation o gums
Gloss/ Glosso	the tongue	**Glosso**dynia	pain in the tong characterized b burning sensati

Gnath/ Gnatho	the jaws	Ortho**gnath**ic	pertains to maintaining jaw their correct re and dimension. An Orthognathi surgery means operation cond to fix jaw defor due to size or position. .
Inguin/Inguino	the groin	**Inguino**dynia	Post-surgical pa after the opera an **inguin**al he An **Inguin**al he occurs when th tissues of the intestines push through the ba the abdomen. I appears as a lu the groin. It als reveals itself as enlargement of scrotum in mal
Irid/ Irido	the iris of the eye	**Irido**ciclitis	inflammation o iris as well as t ciliary parts of eye
Labi/ Labio	lips/ lip-like	**Labi**a	the lip-like skin of the vulva wh serves as a protection to th opening of the vagina.
Lapar/ Laparo	the abdomen	**Laparo**scopy	a surgical opera where a fiber-o gadget is introd

			via the abdomi wall, to allow t surgeon to see organs within t abdomen This is often do for diagnosis of abdominal dise or as part of a surgical proced within the abdo
Later/ Latero	the side/ parts of the body which are farthest from the middle	Bi**later**al, Unilateral	means on both Hence, Bi**later** micromastia re the underdevelopm tissues in both breasts after pu In the same wa uni**later**al hear loss refers to si sided deafness, where only one affected.
Lingu/ Lingo/ Linguo	the tongue	**Linguo**gingival	pertains to the tongue and the Hence, a **linguo**gingival groove during t embryonic stag refers to the fu which separate mandibular par the tongue fron rest of the man
Mamm/ Mamma/ Mammo	breasts	**Mammo**gram	is an x-ray examination of breasts

Mast/ Masto	breast	Gyneco**mast**ia	the abnormal enlargement of breasts in male to hormonal imbalances This is a possib effect of hormo replacement th
Nas/ Naso	the nose	**Naso**gastric	pertains to the mouth and the stomach (gastr Hence, a **Naso**gastric intubation is a medical proced where a plastic (**naso**gastric tu introduced via nose, through t throat, and into stomach, for as ventilation.
Occipit/ Occipito	the back of the head	**Occipit**al bone	refers to a sauc shaped bone lo at the lower ba area of the sku It contains the portion of the b
Ocul/ Oculo	the eye	**Oculo**gyric	pertains to the elevation of the visual gaze in b eyes An oculogyric c an untoward re to medical diso or pharmaceuti which is manife by a lengthy,

			uncontrollable, upward deviati the person's ey
Odont/ Odonto	the teeth	**Odonto**ma	a benign tumor associated with development o teeth It is brought ab by the abnorm growth of norr dental tissue.
Omphal/ Omphalo	the umbilicus	**Omphalo**ma	is a tumor situa the umbilicus
Onych/ onycho	the nails	Par**onych**ia	painful and pus soft tissue infe involving the fingernails The chronic typ paronychia is u caused by a fu infection (Candidiasis).
Opthalm/ Opthlamo	the eyes	**Opthalmo**scopy	a non-invasive medical proced where the eye (**ophthalmo**lo utilizes an **opthalmo**scop view and check inside of the ey
Optic/ Optico/ Opto	sight	**Opto**metry	An assessment method done t evaluate vision to determine w glasses or cont are required to

			visual problem
Or/ Oro	the mouth	**Oro**pharyngeal	Involves the m as well as the pharynx Hence, **Oro**pharyngeal dysphagia pert difficulty in swallowing due abnormalities o malfunction no in the throat bu in the mouth.
Ot/ Oto	the ear/s	**Ot**itis media	Inflammation o middle ear brou about by an inf (caused by eith bacteria or a vi spreading to th Eustachian tub
Papill/ Papillo	the nipple	**Papillo**ma	a non-cancerou tumor in the br ducts which co of mammary epithelium (cell which make up breast's duct w linings) They block the fully and have that resemble fingers.
Pelv/ Pelvo	pelvis	**Pelv**iectasis	the dilation of t renal pelvis
Phall/ Phallo	the penis	**Phallo**plasty	a surgical proc

			performed to augment or to the penis
Pil/ Pilo	hair	**Pilo**cystic	term used to d a cyst which co hair
Pod/ Podo	the foot/feet	**Pod**iatry	a branch of me which is dedica the treatment, medical and su of the foot and parts of the lov extremities
Rhin/ Rhino	the nose	**Rhino**rrhea	pertains to a condition wher nasal cavity is persistently fille with substantia amounts of mu fluid
Somat/ Somato	body	**Somato**genic	relates to the b Hence, **Somat** diseases refer t illnesses which originate from parts of the bo These are the opposite of **psycho**genic diseases where cause of the illn of mental origi
Steth/ Stetho	the chest	**Stetho**scope	an acoustic too usually placed

			against the che used for listeni the inner sound the body, so as in diagnosis.
Stomat/ Stomato	mouth/ opening	**Stomat**itis	inflamed mucus membranes of mouth
Tal/ Talo	the ankle	Sub**tal**ar dislocation	the dislocation bone in the hin which connects the tibia (shinb and the fibula (leg bone)
Tars/ Tarso	foot	**Tars**algia	pain experience the rear area o foot This commonly occurs in indivi with flat feet.
Thorac/ Thoraco	the chest/ thorax	**Thorac**entesis	a sterile proced wherein fluid is removed from pleural space (space between two pleural membranes of lung) This is done th the insertion of needle via the wall.
Tracheo/ Trachelo	the neck/ neckline	**Trachelo**myitis	inflammation o neck muscles
Trich/ Tricho	hair/ like hair	**Trich**iasis	a condition wh

			the direction of growth of the eyelash is chan The lashes end growing inward the direction of eyeball. Consequently, hairs may rub a the eye and ca cause irritation even corneal damage.
Ventr/ Ventri/ Ventro	the front part of the body	**Ventro**gluteal IM	a deep muscula injection into th gluteus medius the outer surfa the pelvis

Internal Root Words

In the following table, you'll find the most common root words pertaining to the ***inner*** parts of the body and their functions.

Internal Root Word	What it Pertains to	Example	Meaning
Acanth/ Acantho	spinous/ with spikes	**Acantho**cyte	a red blood cell with a spinous cell membrane
Aer/ Aero	Gas	**Aero**sinusitis	inflamed nasal sinuses, more commonly experienced by deep sea divers and high altitude flyers This is caused by the difference between internal sinus cavity pressure and the atmospheric pressure.
Alge/ Algo/ Algio	pain	An**alge**sics	a group of pharmaceutical drugs used to obtain relief from pain
Andro	masculine	**Andro**blastoma	tumor in the

			testicles
Bronch/ Bronchi/ Broncho	the bronchus (part of the respiratory system that directs air into the lungs)	**Broncho**constrictor	an element or a drug which causes the airways in the lungs to constrict and narrow It can potentially trigger an asthma attack.
Bronchiol/ Bronchio	bronchiole/s (smaller airways which branch off the bronchi)	**Bronchiol**itis	a severe viral infection affecting the lungs where there is inflammation of the bronchioles This occurs more commonly in infants and younger kids. The common causative agent is the respiratory syncytial virus.
Carcin/ Carcino	cancer	**Carcino**gen	any substance, usually a chemical, which is capable of causing cancer When these come in contact with the body in

			harmful amounts, **carcino**genesis occurs. The latter refers to the development of cancer.
Cardi/ Cardio	the heart	**Cardio**myopathy	any clinical condition which affects the muscles of the heart and causes diminishing of the force of cardiac contraction This effect reduces the cardiac output and efficiency o blood circulation.
Cellul/ Cellulo	cell	**Cellul**itis	an infection in the skin and in the underlying tissues caused by bacteria, often by streptococci, which gains access to the skin through a wound
Cerebell/ Cerebello	cerebellum	**Cerebell**ar ataxia	refers to the irregular, spasmodic, and

			involuntary movements brought about by diseases of the cerebellum or an injury to the cerebellum
Cerebr/ Cerberi/ Cerbero	cerebrum	**Cerebro**vascular disease	any medical condition which affects the arteries within the brain or the arteries supplying blood to the brain
Chol/ Chole	bile	**Chol**angiography	a diagnostic procedure where a contrast medium is used to render the bile ducts visible through an X-ray It is done to check for the presence of biliary stones or tumors, or to determine if there is narrowing of the bile ducts.
Cholecyst/ Cholecysto	the gallbladder	**Cholecyst**ectomy	the removal of the gallbladder through surgical means

Chrom/ Chromo	color	**Chrom**atogenous	producing color
Col/ Colo	colon	**Colo**stomy	a surgical procedure wherein part of the colon is taken out via an incision made in the wall of the abdomen An artificial opening is then made in this colon segment, which serves as an exit point of feces. The fecal matter will be eliminated into a bag affixed to the patient's skin.
Colp/ Colpo	the vagina	**Colpo**scopy	A diagnostic procedure where the cervix and the vagina are visually inspected through a magnifying device (**Colp**oscope) This is done as part of a screening procedure for cancer.

Cost/ Costo	rib	**Cost**algia	pain in the chest area caused by injury to one of the ribs
Cry/ Cryo	cold	**Cryo**surgery	a therapeutic procedure, where extremely low temperatures are utilized for the destruction of tissues Alternatively, the cold may be used to promote adhesion between a tool and the tissue.
Crypt/ Crypto	hidden	**Crypto**rchidism	a developmental disorder in newborn boys, characterized by failure of the testes to drop into the scrotum
Cutane/ Cutaneo	skin	Sub**cutaneo**us	The area underneath the skin; for example, a subcutaneous injection is given just below the skin.

Cyan/ Cyano	blue	**Cyano**sis	a skin discoloration, where the extremities of the face turn bluish, as a result of excessive amounts of deoxygenated hemoglobin in the blood Cyanosis of the lips is indicative of heart failure or chronic obstructive pulmonary disease.
Cysti/ Cyst/ Cysto	cyst	**Cysti**cerosis	a severe albeit rare condition, where there is an infestation of parasitic cysts within the muscles and even in the brain This is brought about by the infestation of pork tapeworm.
Cyt/ Cyto	cell	**Cyto**logy	pertains to the study of individual cells It is useful in medicine particularly

			when it comes to detecting anomalous, possibly malignant cells in cancer screening.
Dipl/ Diplo	double	**Dipl**opia	clinical term for double vision
Duoden/ Duodeno	duodenum	**Duoden**itis	inflamed duodenum, which creates ambiguous gastrointestinal symptoms
Encephal/ Encephalo	brain	Electro**encephalo**gram	a diagnostic procedure done to check for abnormalities in the brain's electrical activity It is done by tracking and recording brain wave patterns.
Enter/ Entro	intestine	Gastro**enter**itis	infection of the stomach and the intestines, usually due to a viral or bacterial causative agent
Episi/Episio	the vulva	**Episio**rrhaphy	surgical repair of a laceration of the vulva This usually is done after an

			episiotomy where the perineum and the posterior vaginal wall are cut by the obstetrician during the second phase of labor. Episiotomy is performed to ease the passage of the infant through a bigger opening, and to prevent irregular tearing of the vulva.
Eryth/ Erythro	red	**Eryth**rocytes	red blood cells
Esophag/ Esophago	esophagus	**Esophag**itis	inflammation of the esophageal lining
Fibr/ Fibro	fibers	**Fibro**sis	scar tissue overgrowth, caused by the body's exaggerated healing mechanism as a response to an infection, a wound, or inflammation For instance, in the case of esophagitis, the thick scar tissue

			ends up narrowing the esophagus and causing difficulty in swallowing.
Galact/ Galacto	milk	**Galacto**rrhea	excessive production of milk or milk-like discharge from the nipples It can happen to non-pregnant women, menopausal women, men, and even babies. This is often the result of high levels of prolactin, a hormone that triggers the production of milk.
Gastr/ Gastro	stomach	**Gastro**stomy	a surgical procedure where an opening is created in the stomach, so that a feeding tube may be attached
Glyc/ Glyco	sugar	**Glyco**penia	sugar deficiency
Gynec/ Gyneco	female	**Gyneco**logy	a medical practice which

			specifically deals with female reproductive health
Hemat/ Hemato	blood	**Hemat**oma	localized pooling of blood ,(often solidified) brought about by bleeding from a vessel that has ruptured
Hepat/ Hepato/ Hepatic	the liver	**Hepato**megaly	enlargement of the liver
Heter/ Hetero	dissimilar	**Hetero**chromia	a congenital condition where there is a difference in the color of the skin, the hair, but most often in the iris. (eg. one eye is brown and the other is blue) However, it can also be the effect of a medical condition or an injury.
Hidr/ Hidro	sweat	Hyper**hidro**sis	excessive sweating

Hist/ Histo/ Histio	tissue	**Histo**logy	refers to the study of tissues, as well as their cellular structures and function This field is valuable to medicine particularly in the diagnosis of illnesses.
Hom/ Homo/ Home/ Homeo	similar	**Homeo**plasia	the development of new, similar tissue
Hydr/ Hydro	water	**Hydro**cele	a condition where the space around the testes is filled with fluid This causes tender swelling in the scrotum and may be brought about by an injury sustained by the testes, by inflammation, o by tumors.
Hyster/ Hystero	the uterus	**Hyster**ectomy	the operative removal of the uterus for a therapeutic cause
Iatr/ Iatro	treatment	**Iatro**genic	suggests a link

			to treatment Thus, an **Iatro**genic anemia (low hemoglobin and hematocrit values) is the result of the recurrent removal of large volumes of blood. This could be because of repeated laboratory testing for diagnostic or monitoring purpose, or surgical blood loss. In such cases, the cure becomes the cause.
Jejun/ Jejuno	jejunum (mid-part of the small intestine)	**Jenun**ostomy	a surgical procedure where an opening is created through the wall of the jejunum, so that a plastic tube may be inserted for feeding
Kerat/Kerato	the eye's cornea	**Kerato**malacia	a disease of the eyes brought about a by lack

			of vitamin A In this condition, the cornea becomes cloudy and ulcerated and eventually, perforated. This could lead to loss of vision.
Laryng/ Laryngo	the larynx	**Laryng**itis	inflamed larynx
Leuk/ Leuko	white	**Leuk**emia	the excessive propagation of immature white blood cells, which leads to the incompetence of vital body organs such as the spleen, the brain, and the liver, once the abnormal cells infiltrate them
Lip/ Lipo/ Lipid/ Lipido	fat	**Lipo**sarcoma	an unusual type of connective tissue cancer, where the abnormal cells look like fat cells Swelling is experienced in the thighs and in the abdominal

			region.
Lith/ Litho	stone (usually in the kidney or the gallbladder)	**Litho**tomy	surgical remova of stones from areas of the urinary tract
Lymph/ Lympho	the lymph vessels	**Lymph**angiography	a diagnostic test conducted through the injection of a contrast agent into the lymph vessels, in order to make any abnormalities visible through X-rays
Melan/ Melano	black	**Melano**cytes	cells that form melanin
Men/ Meno	menstruation	**Meno**rrhagia	abnormally disproportionate menstrual bleeding
Mening/ Meningo	meninges	**Mening**itis	inflamed and infected meninges, with a bacteria or a virus as the causative agent This fatal condition is accompanied by severe headaches, photosensitivity, and stiffening of the muscles.
Metr/	uterus	**Metro**rrhagia	irregular

Metra/ Metro			bleeding from the uterus that is experienced between the woman's monthly periods
My/ Myo	muscle	**My**algia	clinical term for muscular pain
Myel/ Myelo	the spine or the bone marrow	**Myelo**sclerosis	proliferation of fibrous tissue in the bone marrow This impairs the bone marrow's competence in producing blood cells.
Myring/ Myringo	the eardrum	**Myringo**plasty	a corrective operative procedure where a hole in the eardrum is closed through tissue grafting
Nat/ Nato	birth	Neo**nat**e	a newborn baby, less than four months
Necr/ Necro	death	**Necro**sis	refers to the death of tissue cells, when the supply of blood is not sufficient (ischemia), or as a result of an infection (such

			as in the case o tuberculosis) It can also be caused by damage brought about by extreme temperatures, or exposure to radiation or harmful chemicals.
Nephr/ Nephro	the kidney/s	**Nephro**calcinosis	the presence of calcium deposits in one or both kidneys
Oophor/ Oophoro	the ovaries	**Oophor**ectomy	surgical remova of the ovaries, as a last resort treatment for ovarian cysts or ovarian cancer
Orchi/ Orchid/ Orchido/ Orchio	the testes	**Orchi**tis	inflamed testes accompanied by high temperature, severe pain, and swelling around the area When this occurs post-puberty, it is commonly due to the mumps virus.
Oss/ Osseo/	the bones	**Osteo**myelitis	an infection,

Ossi/ Ost/ Osteo			usually of bacterial origin, of the bone and in the bone marrow
Palat/ Palato	the palate (roof of the mouth)	**Palato**plasty	surgical reconstruction of a cleft palate
Path/ Patho	disease	**Patho**gen	causative agent of a disease, usually a microorganism
Periton/ Peritone	the peritoneum	**Periton**itis	inflamed peritoneum This is usually brought about by entry of bacteria and digestive fluids into the abdominal cavity, through a punctured stomach or intestinal wall.
Pharmac/ Pharmaco	drugs	**Pharmaco**dynamics	the term which pertains to the way the body reacts to, synthesizes, and benefits from a pharmaceutical substance
Pharyng/ Pharyngo	the pharynx	**Pharyng**itis	inflamed pharynx usually due to a viral or

			bacterial pathogen It can also be caused by irritants such as smoking, foreign objects, and ingested corrosive substances.
Phleb/ Phlebo	vein	**Phleb**itis	the inflammation of a vein; usually occurs after injection of an irritant drug into the vein.
Phren/ Phreno	diaphragm	**Phren**ic nerve	a nerve which supplies the diaphragm It is essential for breathing. When injured or removed, half of the diaphragm will be rendered paralyzed.
Pleur/ Pleuro	the pleura	**Pleur**isy	inflamed pleura (membranes which envelop the lungs) due to infections of the lung, pulmonary embolism, or

			cancer of the lung
Pneum/ Pneuma/ Pneumo/ Pneumato	the lungs	**Pneumo**thorax	a potentially fatal condition where air leaks into the pleural cavity (the gaps between the two pleura surrounding the lungs) This will eventually lead to lung collapse, because of pleural compression on the lungs.
Poli/ Polio	gray	**Polio**myelitis	an infectious condition caused by a viral pathogen The severe type tends to affect the brain (especially the nervous system's gray matter) and the spinal cord. When this happens, the disease becomes fatal.
Proct/ Procto	the anus or the rectum	**Proct**itis	inflamed rectum commonly accompanied by pain, bleeding,

			and pus. It occurs in conditions such as Crohn's disease and ulcerative colitis. It may also be caused by gonorrhea and other sexually transmitted infections.
Pulmon/ Pulmono	the lungs	**Pulmon**ary hypertension	a condition wherein there is an abnormally elevated blood pressure in the arteries which provide blood to the lungs
Pyel/ Pyelo	the pelvis/ the kidneys	**Pyelo**nephritis	inflamed kidney/s often due to a bacterial causative agent
Rect/ Recto	the rectum	**Recto**cele	a condition wherein the tissues of the vaginal wall are weakened and the back wall of the vagina bulges inward and downward because the rectum is pushing against it

Sacr/ Sacro	the sacrum	**Sacr**algia	this is the pain experienced in the sacrum, usually associated with disc prolapse This is due to the pressure created on the spinal nerve.
Salping/ Salpingo	the fallopian tube	**Salping**itis	inflamed fallopian tube/s, which may be due to a pelvic inflammatory disease but is more often brought about by sexually transmitted infections
Sarc/ Sarco	flesh	**Sarco**idosis	a sporadic inflammatory disease of unknown origin which affects tissues around the body, most frequently the skin, the liver, and the lymph nodes
Sept/ Septo	contamination	**Sept**icemia	a deadly condition where there is fast propagation of bacteria which release toxins

			into the bloodstream This happens when the pathogen escapes from the local area of infection (eg. an abscess). This commonly affects individuals with poor immune systems, such as cancer patients, HIV patients, or those taking medications which suppress the immune system.
Splen/ Spleno	the spleen	Hyper**splen**ism	an overly active spleen
Spondyl/ Spondylo	the vertebra	**Spondylo**sis	a spinal disorder in which the arch of the 5th lumbar vertebra is not made up of normal bone as it should be, but is instead composed of soft, fibrous tissue which is weak and susceptible to damage
Ten/ Tend/	tendon	**Tend**initis	inflamed

Tendo/ Teno			tendon, frequently due to an injury or excessive use
Testicul/ Testiculo	testis	**Testicul**ar Feminization Syndrome	(now more commonly referred to as Complete Androgen Insensitivity Syndrome) In this case, the infants are born as girls with vaginal pouches sans uterus or any other female reproductive organs. A testes is present in the abdomen or in the inguinal region. However, the body's tissues are unable to respond to testosterone which is responsible for the development of male sexual characteristics.
Therm/ Thermo	heat	**Thermo**graphy	a method where the temperature patterns of the skin's surface are documented

			as images
Thyr/ Thyro	the thyroid gland	Hypo**thyro**idism	a condition where the thyroid hormone production in the body is less than normal
Tonsill/ Tonsillo	the tonsils	**Tonsill**ectomy	a surgical operation conducted for removal of the tonsils
Trache/ Tracheo	the trachea	**Trache**ostomy	an emergency procedure, done by creating an opening in the windpipe when the person's upper airway is obstructed This way, a tube, sometimes connected to an oxygen supply or ventilator, can be inserted.
Tympan/ Tympano	the eardrum	**Tympan**ostomy tube	a tube which is introduced into the eardrum, to avoid fluid buildup in the middle ear
Ur/ Ure/ Urea/ Ureo/ Urin/ Urino/	urine	**Urin**alysis	a diagnostic test conducted to measure the

Uro			urine's physical characteristics, such as the color and the concentration
Urethr/ Urethero	urethra	**Urethro**cele	a female deformity wherein the tissues in the vagina's front wall are weakened, thus allowing the urethra to bulge back and down into the vagina
Vesic/ Vesico	the bladder	**Vesico**ureteral reflux	the retrograde flow of urine from the bladder back to the kidneys In normal situations, the flow is from the kidney, through the ureters, and toward the bladder.
Viscer/ Viscero	internal organs (the viscera)	**Viscero**ptosis	the prolapse/ downward displacement of the internal organs within the abdomen
Xanth/ Xantho	yellow	**Xantho**chromia	yellowish discoloration,

			which is indicative of the presence of bilirubin in the cerebrospinal fluid
Xer/ Xero	dry	**Xer**ophthlamia	dryness of the eyes, involving the cornea and the conjunctiva, caused by lack of vitamin A

Directional Root Words

The following are the most common directional terms that are encountered in medicine. In medical terminology, you'll notice that they're often joined together or affixed to another word (e.g. a body part), in order to denote a specific route. Every day, in the medical setting, they are used to specify an intravenous site, the particular location of an infection or an injury, or the direction towards which a patient must be moved.

➢ **Anterior** or **Ventral** means the front of the body or toward the front part of the human anatomy.

Hence, the **ante**cubital vein refers to a vein situated in the front part of the body, specifically in front of the elbow.

➢ **Posterior** and **Dorsal** are the opposite of ventral, since they refer to the rear part of the body or the direction toward the back of the human anatomy.

For instance, the **dorso**gluteal injection site is located in the buttocks, specifically in the upper outer quadrant of the gluteal muscles. An experienced medical practitioner finds it easy by dividing the cheek of the buttocks into four corresponding quadrants and then inserting the needle into the superior lateral region.

➢ **Superior** or **Cranial** means upper. It pertains to a position which is situated higher than or above a body part.

A surgically created connection between the flesh and the bladder is required for draining the urine of patients suffering from urinary tract obstructions. Therefore, a **supra**pubic catheter is inserted to the bladder via a skin incision made slightly *above* the pubic bone.

➢ As mentioned previously, **Caudal** means tail. A synonymous directional word is **Inferior**. As a directional term, both mean lower. They pertain to

a position which is situated lower than or below a body part.

The **inferior** vena cava, for instance, is a major vein which transports deoxygenated blood coming from the lower part of your body toward your heart's right atrium.

Likewise, when a doctor performs a cephalo**caudal** assessment, this means s/he assesses the patient from head to toe.

- As stated previously, Lateral means at the side or toward the side of the body. **Latero**collis, therefore, is the involuntary movement of the head from side to side. This is observed in patients with neck dystonia. Fittingly, **Antero**colis pertains to the abnormal forward movement of the head.
- Whereas lateral is used to describe a direction *away* from the middle of the body, the term **Medial** means the opposite. It pertains to the middle or going toward the center of the human anatomy.

If a patient is experiencing antero**medial** knee pain, then the front and center part of his knee is in pain.

- **Proximal**, when used to describe a limb, refers to the part which is nearest to the torso or to the joint.
- Conversely, **Distal** is used to refer to the site which is farthest from the torso or the joint.

When a pediatrician says that a child manifests normal **Proximo**distal development, he means to say that the motor skills in body parts which are closest to the torso develop earlier than the motor skills in body parts which are further (distal) from the trunk. In other words, the child will first learn how to wave his arms before learning how to paint pictures with his fingers.

- **Superficial** is used to refer to a position which is closest to the body's surface.
- On the other hand, **Deep** pertains to a position which is distant or away from

the body's surface.

Example: The body's fascia serve as protective paddings. They work to decrease the fiction of muscular force.

The **Superficial** fascia makes up the layer below the skin.

However, the **Deep** fascia is found further within the body since it envelops the blood vessels, the nerves, and the bones.

Ready for a word-building activity now?

Word Building Exercise

Part 1 - Instruction: Choose the correct word part to fill in the blanks.

Define: Inflammation of the throat. Answer: _____

[fill in the blank]-itis

ot

tonsill

encephal

rhin

neur

laryng

Define: Specialist working with the nerves. Answer: _____

[fill in the blank]-ologist

cardi

ophthal

neur

gastr

mamm

colon

Define: the study of the bones. Answer: _____

[fill in the blank]-ology

odont

rhin

phleb
ot
cardi
oste

Define: a slow heartbeat. Answer: _____
brady-[fill in the blank]
derma
gastro
rhino
lacrima
cardia
oculo

Define: inflammation of the brain. Answer: _____
[fill in the blank]-itis
ot
hepa
gastr
encephal
tonsill
col

Define: inflammation of the area around the heart. Answer: _____
[fill in the blank]-card-[fill in the blank]
chloro
itis
micro

endo
oscopy
peri

Define: Disease of the nerves. Answer: _____
neuro-[fill in the blank]
megaly
scopy
logy
itis
gram
pathy

Define: A picture taken of the heart using electricity. Answer: _____
[fill in the blank]-cardio-[fill in the blank]
hyper
gram
ologist
echo
scope
electro

Define: too much cholesterol in the blood. Answer: _____
[fill in the blank]-cholesterol-[fill in the blank]
pathy
itis
exo
hyper

megalo

emia

Define: Inflammation of the nose. Answer: _____

[fill in the blank]-itis

gastro

ot

laryng

neph

hepat

rhin

***Part 2* – Instruction**: Choose the correct answer to the following questions:

What body system does osteoporosis affect? **Answer:** _____

heart

bone

eye

Which word does not belong? **Answer:** _____

hypersensitivity

hyperactivity

hypotension

Is Hepatitis inflammation of the liver? **Answer:** _____

true

false

Is Pericarditis inflammation of the kidney? **Answer:** _____

true

false

If a doctor wants to look at the colon of a patient, what is this procedure called? **Answer:** _____

Microscopy

Mammography

Colonoscopy

Great job! Correct answers are in chapter 11.

Chapter 4: Pronouncing Medical Terms

Majority of medical terms are challenging to pronounce. In some cases, a letter might be pronounced differently in two ways. In others meanwhile, some letters are pronounced silently. Rules of pronunciation are not the same for every letter and word. However, learning the basic and most commonly used rules can help medical and non-medical people to pronounce similar medical terms. Featured here are some of the most commonly used medical terms and how to pronounce them.

A. Sounds in Pronunciation

1. Beginning with “j”, pronounced as: “j”

Example: **j**aundice

2. Beginning with “sk”, pronounced as: “sk”

Example: **sk**eletal

3. Beginning with “gy”, pronounced as: “guy”

Example: **gy**necologist

4. Beginning with “cho”, pronounced as: “k”

Example: **ch**olesterol

5. Beginning with “ce” or “ci”, pronounced as: “si”

Example: **ce**liac

6. Beginning with “gi” or “ge”, pronounced as: “j”

Example: **gi**ardiasis

7. Beginning with “kn”, pronounced as: “n”

Example: **kn**ock **kn**ees

8. Beginning with “cu” or “ca”, pronounced as: “k”

Example: **Cu**shing’s syndrome

1. Beginning with “x”, pronounced as: “z”

Example: **x**erophthalmia

2. Beginning with “psy”, pronounced as: “siy” with silent letter “p”

Example: **psy**chology

3. Beginning with “n” and is followed by a vowel, pronounced as: “n”

Example: **n**orovirus

4. Beginning with “ph”, pronounced as: “f”

Example: **ph**ysiotherapy

5. Beginning with “cy”, pronounced as: “s”

Conditions: if “cy” followed by “s”, it is pronounced as “see”

If “cy” followed by other letters, it is pronounced as “si”

Example: **cy**stoscopy, **cy**stocele vs. cytology

6. Beginning with “sch”, pronounced as: “sk”

Example: **sch**istosomiasis

7. Beginning with “pn”, pronounced as: “n” with silent “p”

Example: **pn**eumococcal

8. Beginning with “k” and is followed by a vowel, pronounced as: “k”

Example: **k**idney

9. Beginning with "g" and is followed by a consonant, pronounced as: “guh”

Example: **gr**anuloma

10. Beginning with "z", pronounced as: “z”

Example: **z**ika virus

11. Beginning with "sc", pronounced as: “sk”

Example: **sc**oliosis

12. Root word ending with “g”, followed by “e” or “i”, pronounced as: “j”

Example: laryn**ge**al

13. Medical term with “oe” or “ae”, pronounced as: “e”

Example: oligomenorrh**oe**a

14. Beginning with “thy” or “ty”, pronounced as: “thi” or “ti”

Example: **thy**roid, **ty**phoid (except in typhus which is pronounced as “tee-foos”)

15. Ending with “thy”, pronounced as: pronounced as soft “thee”

Example: trime**thy**laminuria

For medical professionals, part of voicing their knowledge is to pronounce medical terms correctly. This ensures proper communication with other

medical team members, providing successful medical care for patients.

A. Sound Exercise

Instruction: Choose the correct sound of the highlighted letters.

1. Laryngectomy. **Answer:** _____

g
j
guh

2. Gynaecomastia. **Answer:** _____

guh
guy
juy

3. Gingivitis. **Answer:** _____

juh
chu
j

4. Phimosis. **Answer:** _____

chi
p
f

5. Koilonychia. **Answer:** _____

ch
k
c

6. Scleroderma. **Answer:** _____

sh
ch
sk

7. Encopresis. **Answer:** _____

ch
k
s

8. Typhus. **Answer:** _____

s
ch
f

9. Oesophageal. **Answer:** _____

a
o
e

1. Neurone. **Answer:** _____

new
nu
ne

2. Anaemia. **Answer:** _____

o
a
e

3. Homocystinuria. **Answer:** _____

see

si
se

4. Mastocytosis. **Answer:** _____

si
say
see

5. Encephalitis. **Answer:** _____

ch
f
s

6. Neuropathy. **Answer:** _____

thee
thi
thy

Good job! Answers are in chapter 11.

Chapter 5: Memorizing Medical Terms

Using different learning methods and tools can help memorizing medical terms easier. Given below are the most commonly used methods for memorizing medical terms quickly and easily:

A. Using Flashcards and Phone Apps

1. Word Flashcards

For visual learners, flashcards are a great option for memorizing. It allows learners to associate medical terms with visual cues, and helps them to connect and commit such terms to memory. It also provides a cheap alternative, especially to students who are always on a tight budget. Flashcards are cheap to make. They can be made at home using board paper and a pen or marker. They are the most inexpensive study aids that students can rely on.

Apart from being affordable, the process of making flashcards at home can help learners to rewrite medical terms repetitively. This can help them to remember medical terms more easily, thus making it easy to memorize words that they've learned.

For learners who are too busy to create flashcards at home, there are always ones that are available online, or in bookstores that are professionally made. What's more, pre-made flashcards often have images in them that can help learners to memorize medical terms visually.

2. Phone Apps

Another visual option is by using apps that are readily available on mobile devices and smart phones. By using phone apps, there is no need to carry books or flashcards all the time. This is a good option

for learners who are always travelling.

There are many apps that can help learners to memorize medical terms, but only a few are reliable. Given below are a number of Android and iOS apps that are helpful in memorizing medical terms:

For Android Phones

- App name: Med Term Scramble

Developer: Pearson Education

It is played like Scramble, but it uses only medical terms. It features more than 30 different lists or words. An iOS version is also available.

- App name: Learn Medical Terminology

Developer: MedTerminologyForCare UK

This app features interactive e-learning courses and medical terms exercises. There are also lists of prefixes, roots and suffixes to discover – all for free.

- App name: Medical Terminology Quiz

Developer: Quetzal Inc.

This app features a multiple choice quiz on twelve different topics discussing the anatomy of the human body.

- App name: Medical Terms EN

Developer: Tech IndiaNa Pvt. Ltd.

This app features commonly used medical terms, including diseases, symptoms, and tests. It also has a voice-enabled search, word completion, and other smart options.

- App name: Medical Terminologies

Developer: Medical Group Soft

This app is a simple, but comprehensive dictionary of medical terms. It also works when offline.

- App name: Medical Terminology Flashcards

Developer: Simple Tree LLC

While it has pre-made flashcards, it also allows users to create their own cards. It features a progress tracker.

For iOS Phones

- App name: Medical Terminology and Abbreviations

Developer: Air Capital Media LLC

It features a list of prefixes, abbreviations, and suffixes to help learners understand and memorize complicated medical words.

- App name: Eponyms (for students)

Developer: Ossus GmbH

This app features a short description of medical eponyms including more than 1,700 common and complex medical terms.

- App name: MCAT Flashcards – Kaplan National Practice Test

Developer: Kaplan

This app allows users to create flashcards choosing from 200 topics ranging from organic chemistry, general chemistry, physics, and biology.

- App name: Taber's Medical Dictionary

Developer: Unbound Medicine, Inc.

This app features more than 65,000 medical terms with 1,200 photos. It also has 100+ videos and 32,000 audio.

- App name: Med Term Scramble

Developer: Pearson Education

This app, also mentioned earlier, is available on Android phones as well.

- App name: Psych Terms

Developer: Michael Quach

This app is a medical dictionary for terms related to psychiatry, psychology, and other mental health issues.

A. Using Visual Reminders

This applies not only when memorizing medical terms, but to all words as well. Using images to associate with words can help learners memorize terms effectively. Using images to represent medical terms can act as cues when trying to remember words. This works because the human brain is designed to save and remember images as information. For example, by saying the word baby, the mind visualizes an infant instead of spelling out the word itself.

B. Rewriting Medical Terms

With repetition, the memory process speeds up; that's why rewriting medical terms can improve memorization of those words, especially if done by hand. Typing words on a computer or a smart phone doesn't produce the same effect. Also, rewriting study notes can improve understanding of medical terms, making it easier to study them.

Tip: Writing medical terms and their definitions 5 to 10 times produces the best results.

Chapter 6: Prefixes and Suffixes

Learning Prefix, Root, and Suffix

As mentioned, the easiest way to understand medical terms is to learn their parts: the beginning (prefix), middle (root), and ending (suffix). It is also the smartest way to memorize medical terms because almost all medical terms include all these three parts. Most importantly, almost all medical terms are based on a root word which is the core of a word, carrying its meaning.

1. Prefix – the Beginning

The prefix is a group of letters or a single letter, set before a word to change its meaning. For example, the word "unable" has a root word of able. When the prefix "un" is added, the meaning changes from being capable to being not capable. In the medical field, a prefix is a word added before a root word to provide additional information about the time involved, location of an organ, or number of parts.

2. Suffix – the Ending

The suffix is a group of letters or a single letter set after a word to also change its meaning. For example, the word "useful" has a root word of use. When "ful" was added at the end, its meaning became different. From being an act, it became as something that describes value. In the medical field, a suffix is a word added after a root word to include a procedure, disease, or condition.

3. Root Word – the Middle

The root word is sometimes in the middle or at the beginning of medical terms. The easiest way to memorize root words is by learning its Latin or Greek meaning. There is no need to learn long words as long as the root words are kept in mind. So, it's better to focus on root

words instead. For a guide on basic medical root words, please refer to Chapter 2.

4. **Word Combinations**

Sometimes, medical terms may contain more than one root word. For example, there are 2 root words in the medical term “bronchogenic”: “bronch” and “gen”. The letter “o” was added to make pronunciation easier, while the suffix “ic” was added at the end.

Also, medical terms can be formed using a number of combinations:

prefix + root + suffix

root + suffix

prefix + root

Merely by learning prefixes, suffixes, and root words only, learners can already have vast knowledge of medical terms, making it easier to memorize such words.

The Most Important Prefixes

Given below is a table of the most indispensable prefixes in the medical field, accompanied by their meanings, and examples of their applications.

Prefix	Meaning	Example of the Meaning	Meaning of th Example
A	without, devoid of, not	**A**pnea	the absence of breathing
An	devoid of, without	**An**esthesia	without sensatio
Alb	white	**Alb**inism	a condition wher affected individu an abnormally w complexion, due lack of melanin pigment in the s well as in the ey the hair
Auto	self	**Auto**lysis	a self-destructive mechanism of ce which the cells a destroyed by the own enzymes
Bi	both, dual, twice	**Bi**cuspid	possessing dual which is seen in premolar teeth
Co/ Con/ Com	along with	**Con**genital heart disease	inborn defects w disrupt the norm mechanisms of t

			heart
De	down, to rid of	**De**pliatory	a chemical subst used for hair rem typically used in of hirsutism (exc and abnormal ha growth on the fa and the body)
Dis	to rid of, to undo a natural state	**Dis**location	a joint injury wh two or more of t bones are forcib removed from th natural positions
Extra/ Extro	external, beyond	**Extra**uterine pregnancy	the development embryo outside uterus such as in ectopic pregnanc
Hemi	half	**Hemi**plegia	when one half o body is paralyze
Hyper	extreme, excessive, situated above	**Hyper**somnolence	persistent episo excessive drows in the daytime, exaggerated, ex nighttime sleep
Hyp/ Hypo	lacking, situated below or underneath	**Hypo**spadias	a congenital def male infants, wh the urethral ope situated on the underside
Idio	singular, isolated	**Idio**syncrasy	pertains to a rar unpredictable individualized sensitivity to the

			effects of a pharmaceutical substance
Intra	inside, into	**Intra**venous catheter	a catheter inside vein/ inserted in vein
Macro	large	**Macro**mastia	hypertrophy of t breasts
Micro	small	**Micro**aspiration	Accidental aspira of tiny amounts refluxed gastric content into the
Post	succeeding, after, located behind	**Post**prandial	after a meal
Pre	prior, former, before, situated in front of	**Pre**prandial	before a meal Thus, preprandia glucose level pe to your glucose before you eat.
Semi	half	**Semi**conscious	the individual is partially cogniza his surroundings
Syn	linked	**Syn**drome	where a cluster symptoms are li by a single causa agent
Trans	from side to side, through	**Trans**orbital	passing through

			eye socket
Ultra	extreme, beyond normal	**Ultra**sound	sound waves tha travel at an extr high frequency (vibrations that a higher than 20,0 second)

Medical Antonyms

It is easy to decode the definition of a medical term if you know how to spot the prefix. Prefixes like Hyper and Dys are so common in everyday language, that once you get to identify them in medical terms, the convoluted term tends to seem less daunting.

Another useful trick to avoid confusion is to keep your eyes peeled for negative counterparts. Some medical terms may have the same root words and may initially look or sound the same. However, a change in a letter here or there can completely transform the meaning of the word.

Prefix	**Meaning**	**Example of the Meaning**	**Meaning of t Example**
Ab	to move away from	**Ab**duction	a movement aw the body's midli
Ad	to move toward	**Ad**duction	a movement tow body's midline
Bio	life	**Bio**psy	when a tissue ob from a living bo examined to det the existence, th or the severity o illness
Necro	death	**Necro**psy	when a patholog examines a dea to determine the deceased's caus death

Brady	Slow	**Brady**pnea	abnormally slow breathing, usual 12 breaths per m
Tachy	fast	**Tachy**pnea	abnormally rapic breathing, more breaths per minu
Endo	in	**Endo**genous depression	biologically base depression, not by external facto
Exo	out	**Exo**genous depression	depression caus causative factor the body (eg: th environment, otl people, events)
Eu	regular, well	**Eu**thymia	a mood that is n and rationally pc
Dys	hard, irregular, not well	**Dys**thymia	a mild, albeit pe type of depressi
Hyper	too much, more than	**Hyper**plasia	the enlargement organ or tissue by an increase i reproduction rat cells.
Hypo	too little, less than	**Hypo**plasia	under-developm incomplete deve of a tissue or or It refers to an insufficient or be normal number
Retro	backward	**Retro**grade amnesia	Type of memory where the perso

			no longer access that happened i past, specifically before the occu injury or disease
Antero	Forward	**Antero**grade amnesia	the inability of th affected individu form new memo following the eve which caused th memory loss

Medical Synonyms

In the medical language, there is a tendency for several words to have the same meaning. Part of the reason is because a huge chunk of medical terms, including prefixes, were derived from Greek and Latin tongues. Hence, it's possible for a modern medical prefix to have both a Greek version and a Latin version which may be used by healthcare professionals interchangeably.

Take a look at the following identical prefixes in their Greek and Latin forms.

Body part	Greek	Latin
Kidneys	**Nephro** **Nephro**lithiasis the formation of stones in the kidneys	**Ren/ Reno** **Ren**al failure other term for kid failure
Navel	**Omphalo** **Omphalo**phobia an irrational fear of belly buttons	**Umbilico** **Umbilico**plasty surgical procedure repair or augment belly button
Teeth	**Odont/ Odonto** **Odonto**blast refers to a cell in the tooth germ which manufactures dentin	**Dent/ Dento** **Dent**al abscess buildup of pus in t gums or the teeth
Breast	**Mast/ Masto** **Mast**ectomy surgical excision of the breast/s	**Mamm/ Mammo Mamma** **Mammo**plasty surgical procedure augment the brea

More Synonymous Prefixes

Words meaning bad, faulty, difficult, or painful
Dys **Dys**pepsia ineffective digestion
Mal **Mal**absorption inability of the small intestinal lining to absorb essential nutrients

Words meaning against
Anti **Anti**dote a substance which works by contradicting the action of a toxic subst
Contra **Contra**ceptive a device or a drug which acts against the normal mechanisms which l conception

Words meaning dual/ both
Ambi **Ambi**dexterity the ability of a person to carry out manual tasks with either hand with

competence
Bi **Bi**fid uvula two clefts in the uvula
Di **Di**gastric muscle muscle under the jaw consisting of two bellies

Words meaning above
Epi **Epi**gastric situated above the stomach
Super **Super**ciliary bony prominence above the sockets of the eyes/ pertaining to the eyebrow
Supra **Supra**sternal situated above the sternum

Words meaning under
Infra **Infra**patellar below the knee

Hypo **Hypo**glossal below the tongue
Sub **Sub**lingual below the tongue

Prefixes Pertaining to Position and Direction

Prefix	**Meaning**	**Example of the Meaning**	**Meaning of th Example**
Circum	around	**Circum**cision	a surgical proced wherein the fore concealing the ti the penis is remo A circumferentia incision is made around the penis While often done hygienic or religi reasons, it may a be performed as treatment for ba which is the inflammation of head of the peni
Dia	Through	**Dia**thermy	a procedure whe heat is produced the body throug frequency electr current. It may be done a treatment for isc to boost blood fl the area. It may be performed to alleviate pain tha originates deep i body.

In	inside, into	**In**tubation	a procedure whe tube is inserted body cavity or a anatomical part
Inter	Between	**Inter**stitial	situated betwee body part or cell such as in the ca **inter**stitial fluid
Intra	within	**Intra**vascular fluid	pertains to fluid contained within vessels It consists prima serum, in which cells are suspen
Juxta	alongside, near	**Juxta**-anastomic artery	refers to the arte situated just bef the area of anastomosis
Meso	in the middle	**Meso**derm	pertains to the m layer of the skin
Para	alongside, beyond, two similar parts	**Para**uterine	near the uterus
Peri	around	**Peri**auricular	around the oute
Pre	prior to, before, situated in front of	**Pre**operative	before surgery
Pro	situated in front of, prior to	**Pro**gnosis	knowledge gathe beforehand

			It pertains to a scientific estimat the most probab outcome of a dis
Re	back	**Re**gurgitation	commonly used describe the bac flow of undigest food matter bac the esophagus o mouth It may also be u describe the bac of other fluids, including blood.
Opistho	situated behind, retrograde	**Opistho**tic	the bony elemer behind the inner capsule

Prefixes for Numbers and Measurements

Prefix	Meaning	Example of the Meaning	Meaning of th Example
Deci	one tenth	**Deci**bel	means one tenth 'bel' It is a unit used express the relat intensity of sou
Kilo	means 1000	**Kilo**gram	a unit of mass, equivalent to a thousand grams
Milli	means one thousandth	**Milli**osmole	1/1000 of an osr
Mono	means one	**Mono**cyte	a cell with one n
Nulli	zero	**Nulli**para	pertains to a fen who has had no children
Primi	first	**Primi**gravida	pertains to a fen on her first preg
Quadri	means four	**Quadri**plegia	when all four extremities are paralyzed
Semi	half	**Semi**circular	half circle or halt encircling, as in case of the **semi**circular car

			These are bony in the inner ear are filled with flu They are crucial maintaining bala and in providing brain with facts orientation.
Tetra	four	**Tetra**cyclic antidepressants	antidepressant d with four fused a rings in their ske formulas Includes Mirtaza and Mianserin
Tri	three	**Tri**cyclic antidepressants	antidepressant d with three atom in their chemical structures Includes Amitrip and Doxepin
Uni	one	**Uni**cellular	pertains to a cel one nucleus

Note: Some measurement prefixes do not pertain to a specific number. Rather, they are used as comparative accessories to distinguish the abnormal from the normal.

An example of such prefix is **Poly** like in **Poly**dipsia. This is an unusually great and insatiable thirst experienced as a symptom of a disease (eg: Diabetes)

The Most Important Suffixes

Below is a table of the most indispensable suffixes in the medical field accompanied by their meanings and examples of their applications.

Suffix	**Meaning**	**Example of the Meaning**	**Meaning of t Example**
Cyte	a cell	Erythro**cyte**	red blood cell
Cytosis	pertains to cells and their functions	Phago**cytosis**	refers to the pro wherein a cell swallows up (ph particle like a microorganism, foreign substanc an old blood cell This is part of th normal immune function of the b
Esis	pertains to a condition, sometimes refers to a disease process or a symptom It may not always give a word a negative meaning.	Enur**esis** / Encopr**esis**	the clinical terms bedwetting and fecal incontinenc
Ion	suggests an action	Circumduct**ion**	pertains to the c (round and roun motion of an ext
Spasm	an involuntary	Broncho**spasm**	paroxysms of th

	muscular contraction		smooth muscles cause the bronc constrict
Stasis	ceasing/ remaining at a constant level	Chole**stasis**	a condition wher there is a blocka bile flow from th to the small inte
Stenosis	constricting or narrowing of an anatomical passage	Aorto**stenosis**	when the aorta narrows due to: congenital cause because of wear tear (in geriatric patients), or when the pers has suffered fron rheumatic fever past and the aor valve is scarred
Tion	could pertain to either a process or a state	Diges**tion**	the process of breaking food do mechanically and the aid of enzym convert them int substances that beneficial to the
Toxic	poisonous to	Hema**toxic**	pertains to some which is poisono the blood
Uria	refers to the state of the urine, often abnormal	Hemat**uria**	the presence of in the urine
Y	pertains to a state or a condition, sometimes	Dactyl**y**/ Syndactyl**y**	While the forme pertains to the arrangement of fingers and toes

	positive and sometimes negative		latter is a term u refer to adhesio between two or of the digits

Suffixes for Surgical and Diagnostic Procedures

Suffix	Meaning	Example of the Meaning	Meaning of t Example
Centesis	a sterile procedure done to remove fluid from an anatomical cavity or space	Amnio**centesis**	a procedure whe amniotic sac is surgically punctu so that the docto obtain a fluid sa
Clasis	to crush	Osteo**clasis**	In this corrective procedure, a bo intentionally frac by the surgeon i order to repair a deformity.
Desis	fusion done through an operative procedure	Ortho**desis**	In this procedur joint is immobiliz after its surface fused with that adjacent bone.
Ectomy	pertains to the surgical excision or removal of a tissue, an organ, or an anatomical part	Thyroid**ectomy**	the surgical rem of a diseased or thyroid gland
Graphy	a diagnostic procedure where X-ray or CT images are produced and	Angio**graphy**	examination by or CT of blood o lymph vessels, c out after the introduction of a

	recorded		radiopaque subs
Gram	a procedure which could pertain to writing, recording, or using X-ray films for diagnostic purposes	Cardio**gram**	In this method, muscle activity i heart is recorde the use of a cardiograph.
Graph	pertains to a tool used to record or to create X-ray images for diagnostic use	Cardio**graph**	a device used to evaluate the hea status of the hea It is capable of detecting discrepancies in electrical potent which stimulates heartbeat.
Meter	a measuring instrument	Sphygmomano**meter**	This device is us measure blood pressure.
Metry	refers to the process of obtaining measurement	Pelvi**metry**	where the dimer of a pregnant woman's pelvis measured, in rel to the delivery o infant
Opsy	means to check or to examine	Bi**opsy**	the removal of a sample tissue fr body of a patien can be examine under a microsc
Pexy	a reparatory surgical procedure	Sacrocolpo**pexy**	the surgical repa slackened organ the pelvis
Plasty	operative	Rhino**plasty**	the clinical term

	reconstructive procedure for therapeutic or cosmetic purposes		correction of nas deformities
Rrhaphy	patching tissues up with sutures	Nephro**rrhaphy**	a surgical techni wherein a detac kidney is kept in by stitching it in posterior abdom wall It is also a term for repair of an i kidney.
Scope	any instrument designed to allow visual examination of an anatomical cavity or an organ of the body	Oto**scope**	a tool used to ex the ear canal an eardrum visually
Scopy	refers to the process of assessing an organ or a cavity of the body visually, with the aid of an instrument	Rhino**scopy**	a procedure don look at the inter a patient's nose inserting a rhino (a tube with ligh a lens) directly i the patient's nas cavity
Stomy	surgical method of establishing a new opening in the body	Sigmoid**ostomy**	the creation of a secondary anus through a stoma (opening) via th sigmoid colon
Tomy	to cut	Phlebo**tomy**	using a needle f

			gaining access i vein This is for the pu of drawing blood

Suffixes for Pathological Conditions

Suffix	Meaning	Example of the Meaning	Meaning of th Example
Algia	pain	Arthr**algia**	clinical term for pain
Asthenia	lack of strength	My**asthenia** Gravis	is a severe autoimmune neuromuscular disorder which is manifested by an unpredictable de of weakness of t body's voluntary muscles
Cele	pertains to an herniation or the protrusion of a body organ	Cysto**cele**	is the herniation bladder into the weakened vagin
Dynia	pertains to pain	Gastro**dynia**	stomach pain
Ectasia/ Ectasis	dilatation which occurs in a hollow body organ	Lymphangi**ectasia**	when a lymph ve is dilated due to external cause (s as a blockage in local lymphatic drainage)
Edema	a condition wherein excessive fluid accumulates in the tissues of the	Cephalo**edema**	Refers to edema occurs within the head, due to flui buildup

	body, or in a body cavity		
Emesis	the clinical term for vomiting	Pye**mesis**	the vomiting of p
Emia	pertains to a blood condition	An**emia**	a clinical conditi characterized by blood cell or hemoglobin defi The affected ind suffers from pall fatigue.
Ia	a condition	Insomn**ia**	a persistent con wherein the affe individual is una sleep
Iasis	suggests an abnormal or unhealthy state	Elephant**iasis**	a parasitic infect which is manifes severe swelling extremities The causative ag the filarial worm may be transfer between human beings via a fem mosquito bite. T parasite develop a grown worm, dwells in the aff individual's lymp system.
Ism	indicates a condition of	Priap**ism**	persistent and p penile erection, occurs even with external and psychological stimulation

Itis	inflammation	Col**itis**	when the lining colon is inflamed
Lith	suggesting the presence of a calculus or a stone, may also mean resembling a stone	Feca**lith**	when a mass of is stuck into the intestinal tract a hardens, so that resembles a stor
Lysis	breakdown, death of	Electro**lysis**	the breakdown o structures, such cancerous mass, through electric currents
Lytic	decomposition of, inhibition of, annihilation of	Anxio**lytic**	Pharmaceutical prescribed to de anxiety
Megaly	the abnormal enlargement of	Cardio**megaly**	the disproportion enlargement of t heart This could be du the excessive thickening of the muscle, or it cou brought about b expansion of one more of the hea chambers.
Malacia	softening/ weakening of	Broncho**malacia**	when the cartila wall of the bronc tubes become fl or weak This commonly o in babies less th

			months of age.
Oma / Ma	indicative of malignancy, an abnormal mass, a tumor	Retino**blastoma**	a malignant form eye cancer when immature cells r develop in the re This is occurs in children, and is by gene mutatio the chromosome
Osis	suggests a condition or a state, often an abnormal one	Halit**osis**	an unpleasant o from breath, due poor hygiene, or symptom of a cli condition
Pathy	indicates a disease or dysfunction	Neuro**pathy**	when one or mo the peripheral ne are dysfunctiona causing the affe individual to bec weak or numb
Penia	lack of	Granuclocyto**penia**	a significant dec in the number o granulocytes The latter are wh blood cells which essential in the immune function the body. They contain granules which are actual microscopic pou which carry enzy that digest micr
Phobia	extreme sensitivity to, irrational fear of	Photo**phobia**	severe sensitivity light, which may brought about b infection (such a

			Rabies), trauma eye, or as an eff a procedure (cat surgery)
Plegia	meaning paralysis	Cyclo**plegia**	a condition wher the ciliary muscl the eye is paraly
Ptosis	the downward displacement or drooping of an anatomical part	Uvulo**ptosis**	also known as a palate This is a conditio wherein the uvu relaxes and elon
Rrhage/ Rrhagia	the abnormally excessive flow of, rupture of	Hemo**rrhage**	the profuse leak blood from a ves
Rrhea	excessive flow of a bodily discharge	Dia**rrhea**	the passage of l watery stools, se times more than
Rrhexis	the rupture of a body organ or a vessel	Angio**rrhexis**	when a blood ve becomes rupture
Sclerosis	hardening of	Athero**sclerosis**	A condition in w there is fatty pla deposits in the i walls of the arte causing them to harden

Grammatical Suffixes

➢ There are some medical suffixes which, when attached to a root word, form an adjective. Some serve to refer to a body system, an anatomical organ, a process, or a condition.

Ac/ Ar/ Ary/ Eal/ Ic/ Al/ Ous/ Tic
Cardi**ac** – pertaining to the heart
Ventricul**ar** – of the ventricle/ connected to the ventricle
Pulmon**ary** – part of the lungs/ originating from the lungs
Esophag**eal** – from the esophagus/ part of the esophagus
Allerg**ic –** brought about by an allergy
Intestin**al** – belonging to or connected to the intestines
Eczemat**ous** – related to eczema
Therapeu**tic** – concerning therapy

➢ There are also suffixes which, when added to a word, changes its meaning from a noun to a verb

Ize/ Ate
Anesthet**ize –** to provide anesthetic, hence to cause loss of sensation or consciousness
Lact**ate –** the act of producing milk
Coagul**ate** – to congeal or to solidify fluid such as blood

Ate
Opi**ate –** an opium derivative Hemolys**ate** – an offshoot of hemolysis

➢ Occasionally, you may come across flexible suffixes with various meanings.

When the suffix **Genic** is added to a root word, this may mean "caused by".

Ex: Cocci**genic** means produced by cocci

However, sometimes, -genic could also be used to mean "causing".

Example: Colla**genic** which means that it triggers the production of collagen

Another use of -genic is to indicate association with a gene. Ex: Tri**genic**

➢ Suffixes are often used to suggest the characteristics, the purpose, or the ability of something.

Ory	**Ile**
Sens**ory -** used for perception, feeling, or sensing (e.g. Sens**ory** neurons)	Erecti**le -** possessing the ability to become erect Contract**ile** - creates contractions

The above suffixes are, at times, also used to indicate a connection to a body system, an anatomical organ, or a disease process.

Aud**ile** – concerning the auditory nerves

Respirat**ory** – connected with the organs for respiration (e.g. Respirat**ory** muscles)

Moreover, **Ile**, in itself may be used to indicate a condition.

E.g: *A patient is febr**ile** when he has a body temperature that is above normal.*

➢ **Oid** is a suffix which is used to suggest the resemblance of something to another.

Muc**oid** for instance, means something which resembles mucus.

➢ Some suffixes are used to signify specialties or specialists in the medical field.

Ician pertains to a professional in a specific field of study.

A Pediatr**ician** is a specialist in the field of medicine dealing with child health and with treating children's illnesses.

Trics relates to medicine, doctors, or treatment.

Obste**trics** is a branch of medicine which deals with childbirth and wit caring for mothers who are about to give birth, are giving birth, or ha given birth.

Iatry is from the Greek word 'iatrea' which translates to "the art of healing". This suffix pertains to a medical profession.

Pod**iatry** is a branch of medicine concerned with the health and treat of the illnesses and infections of the human foot.

Ian, on the other hand, is used to refer to an expert in a field of stud

An example of this is a Geriatric**ian**, who deals with elderly people.
Ist is a suffix used to denote a certified practitioner, such as in the ca a Pharmac**ist** who possesses a license to dispense pharmaceutical dru
Ologist is affixed to a word to pertain to someone who concentrates specific field of study. A Psycholog**ist** specializes in psychology. Howe only a Psychiatrist is licensed to prescribe medications to patients.
Ology, of course, means study, as in Neurol**ogy** This is a field of medicine that is concerned with the parts, the workin the disorders of the nervous system and the nerves.

➢ There are suffixes which are attached to nouns to emphasize their singular form.

Um	**Us**
The Cerebell**um** is the part of the brain located in the rear of the skull. It governs vital functions, such as coordination and muscular movement.	A Streptococc**us** is a single bac

➢ Lastly, there are suffixes which, when added, to a root word, has a diminutive effect.

Icle	Ves**icle**	a small sac filled with fl
Ole	Arteri**ole**	the tiniest branch in the arterial circulation
Ula	Mac**ula**	tiny pigmented patches the skin without elevati

Ule	Pap**ule**	Clinical term for a small pimple or a raised swell on the skin It may be inflamed, but not pus-filled.

Ready for an exercise now?

Medical Terms Exercise

Instruction: Choose the right answer.

1. Suffix “uria” is? **Answer:** _____

condition of urine
urethra
kidney
ureter

2. Amyl/o is? **Answer:** _____

gland
fat
male
starch

3. Prefix “ab” is? **Answer:** _____

down
away from
up
towards

4. Prefix “polio” is what color? **Answer:** _____

black
yellow
gray
red

5. Suffix “oid” is? **Answer:** _____

away
resembling
different
middle

6. Onc/o is? **Answer:** _____

growth
tumor
cell
nail

7. Prefix “neo” is? **Answer:** _____

child
old
baby
new

8. Narc/o is? **Answer:** _____

death
stupor
night
drug

9. Suffix “lithiasis” is? **Answer:** _____

presence of stones
crushing
narrowing
presence of fluid

10. Prefix “hemi” is? **Answer:** _____

quarter
tenth
half
cut

11. Ot/o is? **Answer:** _____

ear
bone
auricle
ossicle

12. Splen/o is? **Answer:** _____

spleen
spasm
pulse
sternum

13. Suffix “natal” is? **Answer:** _____

pregnancy
woman
birth
new

14. Prefix “chlor” is? **Answer:** _____

blue
black
green
white

15. Prefix “retro” is? **Answer:** _____

past

present
forward
backward

Great job! Answers are in the second to the last chapter.

Chapter 7: Eponyms, Homonyms, and More

Homonyms

Derived from the Greek term *Homonymos* which translates to "same name", homonyms refer to words which are pronounced in the same (or in almost the same) way. However, they have completely different definitions. Their spellings may also differ.

The English language is stuffed with homonyms, and so is the medical language. Thus, when healthcare workers communicate with each other, or with their patients, it becomes necessary to check, recheck, and keep rechecking prescriptions, requests, orders, verbal reports, etc. just to make sure that one was able to understand the other correctly. Even if you're not in the medical field, it would be advantageous to know whether your doctor is talking about the long bone in your forelimb (humerus) or if he just thinks you're funny (humorous).

In the table below, you'll find a compilation of the most common, most slippery medical homonyms.

Agonist a pharmaceutical agent that triggers the action of cell molecules in a manner that they would be stimulated by the naturally occurring byproducts	**Antagonist** an element which neutralizes, obstructs, or combats the actic another
Anuresis the inability of the affected individual to pass urine	**Enuresis** uncontrolled urination especial sleeping at night
Apophysis A part of a bone that juts out	**Epiphysis** the rounded edge of a long bo
Aural pertaining to the ear, its parts, and its functions	**Oral** pertaining to the mouth, its pa its functions

Cor pertaining to the heart	**Core** the midpoint
Diaphysis a long bone's shaft situated between the epiphyses	**Diastasis** a condition wherein anatomica that are usually joined togethe separating; may occur in bone as muscles
Diathesis an individual's predisposition to a certain health condition	
Dyskaryosis anomalous change in the squamous epithelial cell manifested as an irregular nuclear structure; may precede the formation of a malignant neoplasm	**Dyskeratosis** unusual keratinization (harden the protein in the skin, hair, ar which occurs in cells under the granulous layer of the epiderm
Dysphagia trouble with swallowing	**Dysphasia** diminished ability to comprehe speech, due to brain injury or disease
Galactorrhea uncharacteristic flow of milk from the breasts	**Galacturia** milky coloring of the urine
Humeral concerned with the humerus	**Humoral** concerned with body fluids
Hypophysis pertains to the pituitary gland	**Hypothesis** a scientific supposition, which provide an explanation for a phenomenon
Ileum the third region of the colon, situated between the cecum and the jejunum	**Ilium** the broadest region of the pelv

Lice ectoparasites which can infest various hair-bearing parts of the body, from the head to the toe	**Lyse** to destroy
Malleolus the bony projection in the ankle that resembles a mallet	**Malleus** a mallet-shaped bone in the m ear
Metaphysis pertains to the broad part at the tip of a long bone	**Metastasis** when a secondary malignant g develops away from the initial the cancer
Mucous mucus-secreting, such as in mucous membranes	**Mucus** sticky secretions secreted by m membranes, that act as a prot and a lubricant
Osteal that which resembles, affects, involves, or is related with the skeleton	**Ostial** pertains to an os/ostium (whic medical terms, means opening
Profuse copious such as in profuse bleeding	**Perfuse** to bring about the flow or the dissemination of something wi tissue
Radicle the smallest subdivision in a nerve	**Radical** created to get rid of every pos prolongation or spread of a mc process, such as in radical trea
Resection when part of an anatomical structure	**Recession** a surgical procedure of the eye

or organ is surgically removed	to correct strabismus (improper alignment of the eyes)
Tract may pertain to a normal anatomical system of organs such as the respiratory tract It may also be used to refer to an aberrant passage through the tissue, such as in the case of a fistula which just creates a deviant system of its own	**Track** pertains to a route, such as in injection
Vesicle a tiny fluid-carrying sac, like the seminal vesicles of men	**Vesical** pertains to the bladder
Viscus the single form of viscera, meaning internal organ	**Viscous** viscid, gelatinous, used to desc bodily secretions

Eponyms

From the Greek word *eponymos* which translates to "to name", Eponyms in medical terms refer to the person, object, or place after which a disease, an instrument, a clinical sign, or a procedure was named. It's a great way to honor the doctors, the scientists, or the researchers who have discovered, designed, inspired, improved, or invented these tools, methods, and knowledge that we are using today.

Medical Term	Named After…	Meaning
Achilles Tendon	a hero in Greek mythology who was physically invulnerable, except for a part of his heel	also referred to as calcaneal tendon, located at the back part of the leg. It is the thickest tendon in the human anatomy.
Addison's disease	Dr. Thomas Addison who was the first one to identify the condition in the 1950's	a potentially life-threatening disease brought about by incompetent adrenal glands, that are incapable of producing sufficient levels of cortisol
Allis clamp	Oscar Huntington Allis who introduced it in the 1880's	a surgical clamp used for holding soft tissues, that is still extensively used to
Alzheimer's Disease	German Neurologist Alois Alzheimer	a worsening deterioration of th

		mental faculties, caused by brain degeneration The affected indivi experiences memo loss, as well as a decline in his cogn abilities.
Apgar Score	its inventor, Virginia Apgar, who was a specialist in the field of Obstetrics	an efficient and qu way to conduct ini assessment of a neonate's health a it is born
Bartholin's Gland	Caspar Bartholin the Second, who discovered it in the 17th century	two small glands situated on either and slightly behind vaginal opening These glands are responsible for secreting mucus to provide lubrication the vaginal region.
Bell's palsy	surgeon and neurologist Charles Bell	paralysis of the fac nerve, which rend the affected indivi incapable of controlling the mu on the affected sid the face.
Broca's Aphasia	Paul Broca, a French anatomist and surgeon	inability of the affe person to create complete sentence or to join words together

		This is due to the damage sustained the left front part the brain after a stroke.
Cushing Syndrome	Harvey William Cushing	a series of sympto brought about by excessively elevate levels of cortisol Along with other symptoms, the affected individual experiences weigh gain and thin skin is easily bruised.
Down's syndrome	John Haydon Down, an English doctor in the 1800's	Also referred to as trisomy 21, it is a chromosomal diso in which affected children manifest characteristic phys features. It is accompanied delayed physical a mental developme with some degree learning disability.
Eustachian Tube	Italian anatomist, Bartolomeo Eustachi, who discovered it	also referred to as auditory tube, it se as a connection between the midd ear and the nasopharynx
Heimlich Maneuver	American surgeon, Henry Heimlich	In emergency medicine, this abdominal thrust i performed during

		choking to rid the airways of obstruc by a foreign body.
Hodgkin's lymphoma	British physician Thomas Hodgkin who made the first account of this disease in the 1830's	a malignant lymph characterized by n sweats, a febrile condition, loss of weight, and enlarg albeit painless lym nodes These may be palpated in the ne in the axilla, or in groin.
Homans' Sign	an American surgeon called John Homans	When pain is experienced in the region upon dorsiflexion of the foot, this is referre as Homans' sign. I indicative of deep thrombosis.
Whipple's Procedure	Allen Whipple	an upper gastrointestinal surgical procedure where the head of pancreas adjacent the duodenum is removed This is performed treatment for canc of the pancreas. The duodenum is removed as well, along with certain areas of the gallbladder and th

		common bile duct. Sometimes, in this radical procedure, portion of the stor is also taken out.

Acronyms

Medical acronyms are abridged versions of medical terms. They are usually made up of the initial letters or syllables of the full term. Sometimes, these acronyms are written in uppercase but that may not always be the case.

Every day, people use words that they don't even realize were actually acronyms. These include *radar* which actually stands for Radio Detection and Ranging. That's because such words have become so deeply integrated into everyday life that eventually, the letters just gave birth to a new word. The same truth applies to the medical field. The following are the most frequently encountered acronyms in the medical language.

Acronym	**Meaning**
AF	Atrial Fibrillation
AIDS	Acquired Immune Deficiency Syndrome
ARDS	Acute Respiratory Distress Syndrome
BPH	Benign Prostatic Hyperthropy
CAT scan **CNS**	Computerized Axial Tomography Central Nervous System
COPD	Chronic Obstructive Pulmonary Disease
CSF	Cerebrospinal Fluid
CVA	Cerebrovascular Accident
CXR	Chest X-ray

ECG	Electrocardiogram
ECT	Electroconvulsive Therapy
EEG	Electroencephalogram
ET	Endotracheal Tube
FB	Foreign Body
FHR	Fetal Heart Rate
GERD	Gastroesophageal Reflux Disease
GI	Gastrointestinal
HR	Heart Rate
HRT	Hormone Replacement Therapy
IBD	Inflammatory Bowel Disease
IBS	Irritable Bowel Syndrome
ICU	Intensive Care Unit
IUD	Intrauterine Device
KVO	Keep Vein Open
MRI	Magnetic Resonance Imaging
MS	Multiple Sclerosis
MVA	Motor Vehicle Accident
NG	Nasogastric
NSAID	Non-Steroidal Anti Inflammatory Drug

PEA	Pulseless Electrical Activity
PID	Pelvic Inflammatory Disease
PPIs	Proton Pump Inhibitors
PT	Prothrombin Time
SZ	Seizure
TAH	Total Abdominal Hysterectomy
THR	Total Hip Replacement
TKR	Total Knee Replacement
UA	Urinalysis
V/Q SCAN	Ventilation Perfusion Scan
VTACH/ VT	Ventricular Tachycardia

Abbreviations

In the medical field, time is definitely gold. The survival, safety, and wellbeing of a patient does not just depend on how properly care is provided, but also on how *promptly* it is delivered. Thus, it is essential that professionals in the medical field create an efficient style of communication that is as quick as it is thorough. Being clear and concise is the key. For this reason, healthcare industry professionals make use of abbreviations. Below are the most commonly encountered abridgements in the medical area and what they mean.

frequently used in relation to pharmaceuticals
a.c. means prior to meals so the drug ordered a.c. will have to be administered before feedi Conversely, **p.c.** is to be taken after meals.
b.i.d. means two times daily however, if a drug is to be taken strictly every 12 hours, then q is written.
cap is a shorter term for capsule.
gtt means drops, commonly used when ordering IV fluids.
IM is short for intramuscular and it usually pertains to the route of injection.
K means potassium. Potassium with chloride is **KCL**.
Meanwhile, sodium is **Na**. Both electrolytes are essential to the body's functions and thus, healthcare workers tend to keep an eye on their levels when a patient is under intensive care
O.D is the condensed form of right eye while **O.S.** means left eye. To pertain to both eyes, **O.U.** is used. These are important especially when administering prescribed eye treatments l opthalmic drops.
PR is per rectum. This means a PR drug, such as a suppository, is to be administered rectall
When a physician writes down **q.d**., it means that a drug must be taken every day. **qod**, on other hand, means every other day. **q.i.d** is four times daily.
*These do not just pertain to drugs but also to other interventions. (ex. chest therapy q.i.d. means to provide physiotherapy to the patient four times a day)
q2h and **q3h** mean every 2 hours and every 3 hours respectively.
qAM, **qPM**, and **qhs** stands for every morning, every evening, and every each bedtime correspondingly.
STAT means that the order must be carried out immediately.

frequently used in relation to surgery and treatmer

BKA means below the knee amputation

A **DNR** order means Do Not Resuscitate. Hence, when a patient goes into cardiac arrest, the team will not take any measures to resuscitate him. This is applicable to near death patients the priority is to ensure a peaceful and dignified passing.

Rather than saying "in the body", a quicker way to do it would be to say **in vivo**.

In vitro, on the other hand, means in the laboratory, as in the case of In Vitro Fertilization.

LLQ stands for left lower quadrant. The definition of this will be discussed more thoroughly i succeeding chapters.

Meanwhile, **LUQ** is left upper quadrant.

npo is the abbreviation for nil per oral or nothing by mouth. This means that a patient is not to consume food or drinks prior to or after a surgical procedure or a diagnostic test.

RLQ means right lower quadrant. So if a patient is complaining from pain in the right side of abdomen, specifically in the lower region, then the medical professional can write down RLQ pain in RLQ.

RUQ means right upper quadrant.

tab refers to medication in tablet form.

frequently used in relation to assessment, documenta and diagnostics

a/g refers to the ratio of albumin to globulin

BP pertains to blood pressure

C&S means culture sensitivity test; a test performed to identify a pathogen, and to determin choice of medicine that can be used to inhibit its growth

CC is an abbreviation for chief complaint. This indicates the reason why the patient sought m attention in the first place. (ex: CC of fever for 7 days)

This is not to be confused with cc in small letters. **cc** stand for cubic centimeters, customarily when measuring the amount of fluid taken from a patient's body.

CBC stands for complete blood count. This blood test is conducted to assess a person's gene It is effective in detecting a broad range of hematological and non-hematological disorders.

When a physician writes down **D/C**, this means something (a treatment, a drug, etc.) will ha discontinued.

On the other hand, **DC** means discharge and is used to indicate that the patient is ready to g home from the hospital.

DTR means Deep Tendon Reflexes. This is what the doctor checks for when s/he hits a tend hammer.

DOE is short for Dyspnea On Exertion. This means a patient may not be having difficulty of b while he's at rest but he is dyspneic when he's ambulatory or performing activities.

DX stands for diagnosis.

LBP is lower back pain

N/V is the abridged form of nausea and vomiting.

T is temperature as measured by a thermometer.

frequently used in relation to diseases

DM is short for diabetes mellitus

DVT means Deep Vein Thrombosis (when a blood clot occurs in a deep vein/s of the body. T
the most affected body part.)

FX indicates a fracture

HTN stands for hypertension

Upper respiratory tract infections and urinary tract infections are common enough to warrant
abbreviations: **URI** and **UTI**

Symbols

Why do medical professionals bother with symbols? It's not that they are deliberately trying to be cryptic. Actually, the reason why symbols are used for communication in the medical setting is because they tend to speed things up. A nurse can easily understand a doctor's order just by glancing at an icon, thus saving precious time.

Moreover, symbols also help in preventing confusion between healthcare professionals. This is especially true in cases where words can be interpreted differently by various individuals. Simply put, symbols are more likely to provide uniformity and are less prone to personalized, biased interpretation.

In the medical language, another way to write **Approximate** is ≈.
α is **Alpha** so instead of jotting down alpha adrenergic blockers, you down α-blockers.
A shorter way to say **At** is @.
Meanwhile, this symbol means **Before**: **ā**
Δ means **To Change**.
When describing **Degrees**, a healthcare professional may just put c **2⁰ 3⁰**, which means first, second, and third degrees respectively.
↑ means **Increase** or **Increased**. Hence, to advise a patient to consumption of liquids, the physician may write ↑ fluid intake.
Correspondingly, ↓ means **Decrease** or **Decreased** such as in output. (decreased urine output)
A **Female** subject may be represented by ♀. Just as a **Male** subject signified by ♂.
Just like in basic math, **<** in Medicine means **Less than** and **>**

Greater than.
Likewise, **=** means **Equal to**.
Instead of writing down **None**, you can put down **Ø**.
50 **Micrograms** of a drug is 50 **µg**.
+ pertains to **Positive** whereas **–** means **Negative**.

Chapter 8: Pluralizing Medical Terms

Rules for the Formation of Plurals

When it comes to the formation of plural forms in the medical language, the following general rules apply:

➢ If the singular form of the word ends in an **–a** suffix, then it is written in the plural form by adding an **e** at the end.

E.g: bursa = bursa**e**

➢ If the singular form of the word ends in an **–ex** suffix or in an **–ix** suffix, then it is changed into the plural form by turning the ending into **–ices**.

E.g: apex = ap**ices**

➢ That said, if the singular word ends in **-nx**, such as in the case of phalanx, then the x is removed and changed to **ges**.

E.g: phalanx = phalan**ges**

➢ Still, if the singular form of the words ends only with an **-x**, then the plural form is created by replacing x with **ces**.

E.g: thorax = thora**ces**

➢ When it comes to pluralizing singular words ending in **–is**, the end i is changed into an **e**.

E.g: testis = test**es**

There are,, however, certain exceptions:

Epididymis is changed into epididym**ides**.

Femoris is pluralized into femor**a**.

Iris in its plural form is ir**ides**.

➢ If the singular form of the medical term ends with an **-on**, replace the last two letters with **a**.

E.g: ganglion = gangli**a**

➢ The same rule applies to singular medical words ending in -**um**.

E.g: labium=labi**a**

➢ To pluralize singular words ending in **-us**, just remove the us and then add **i**.

E.g: malleolus = malleol**i**

There are, however, a few exceptions to this rule:

Corpus is changed into corp**ora**.

Plexus in its plural form is plexus**es**.

Viscus is pluralized into visc**era**.

➢ In the medical vocabulary, there are lots of terms ending in –**itis**. To change these into plural form, remove the itis and then affix **itides**.

E.g: meningitis = mening**itides**

➢ Meanwhile, singular words than end in –**is** are changed into the plural form dropping the is and placing **ides** in its stead.

E.g: arthritis = arthrit**ides**

➢ For singular medical terms that end in **-y**, the plural form is made by using **ies**

to replace the y.

E.g: biopsy = biops**ies**

➢ For singular words ending in **-yx**, remove the x and replace with **c**. Afterwards, add **es**.

E.g: calyx= caly**ces**

➢ There are singular words that end in **ma**/ **oma**. In such cases, **ta** is added.

E.g: sarcoma = sarcoma**ta**

➢ There are also medical terms in which the singular and the pluralized forms are the same.

E.g: meatus = meatus

➢ How are medical terms that consist of two words dealt with? Easy. If the words were derived from Latin, and if they are a combination of a noun and an adjective, change both words into the plural form.

E.g: placenta previa = placenta**e** previa**e**

➢ Inevitably, there are a handful of terms which seem to be immune to all these rules.

Cornu is pluralized into cornu**a**.

Vas in its plural form is vas**a**.

Pons is changed into pon**tes**.

More Rules in the Medical Language

➢ When the medical word is of English origin, apply the rules that your grammar teacher taught you. To pluralize words, the end is simply changed to **s**.

E.g: infection = infection**s**

➢ However, if the word ends in **-s**, add **es**.

E.g: stress = stress**es**

➢ The same rule applies to English medical terms ending in **-ch**.

E.g: crutch = crutch**es**

➢ The previous rule also goes for English medical words ending in **-x** or in **-sh**.

E.g:

wash = wash**es**

flex= flex**es**

➢ If the singular English medical term ends in **-y**, see if the y is preceded by a consonant. If yes, then change the y to **i**. Then, add **es**.

E.g: palsy = pals**ies**

➢ If the singular English medical term ends in **o**, see if the o is preceded by a consonant. If yes, add **nes**.

E.g: comedo = comedo**nes**

Exceptions to the rule include embryo, which is pluralized to embryo**s** and placebo in which the plural form is placebo**s**.

➢ As mentioned previously, abbreviations are used daily in the medical setting. As a general rule, measurement abbreviations are immune to the rules stated above.

E.g:

While one might say that *the cervix is a few centimeter**s** dilated*, one cannot say that *the cervix is 3 cm**s** dilated*. That's because the latter already comes with a number value.

Thus, the proper sentence would be: **The cervix is 3 cm dilated.**

➢ Numbers with single digits are pluralized by adding **'s** (s with an apostrophe).

E.g: The patient was asked to count backwards by 2**'s**.

That said, the apostrophe is dropped when pluralizing numbers with two digits and above.

Wrong: The patient is in his late 40's.

Correct: **The patient is in his late 40s**.

➢ When it comes to pluralizing acronyms, simply add an **s** to terms written in uppercase.

E.g: The abridgment for white blood cell is WBC.

To write white blood cells, put down WBC**s**.

➢ That said, if an abbreviation is written in the lowercase, then an apostrophe is needed.

E.g: wbc = wbc**'s**

Chapter 9: The Structure and Organization of the Body

Anatomical Planes

Anatomical planes refer to imaginary perpendicular and parallel lines drawn across the body, to divide it into sections. For medical professionals, this makes description of specific areas of the body easier.

➢ Coronal Plane

This is otherwise known as the Frontal Plane. It is the vertical place which separates the human body into anterior and posterior portions.

➢ Midsagittal Plane

This is also referred to as the body's midline. It is a horizontal plane which separates the left side of the body from the right, and vice versa.

➢ Sagittal Plane

This refers to a vertical plane which goes from the anterior to the posterior part of the body while separating the body into left and right portions.

➢ Transverse Plane

This pertains to a cross-wise plane which is parallel to the ground, and passes through the waistline. It separates the upper half of the human body from the lower half.

Body Positions

The following are the most commonly encountered terms which describe the position of the body as a whole.

➢ Anatomic Position

This is when the human body is standing upright. The arms are lying at each side and the palms are faced forward. Feet are positioned side by side and the toes are pointing forward.

➢ Erect

When the subject is standing upright.

➢ Genupectoral

Also referred to as the knee-chest position, it is when a patient goes on his knees on an examination table/bed. Then, his head and the upper part of his body are lowered onto the table/bed.

In this position, the majority of the body's weight is carried by the chest and the knees. This is preferable for rectal examinations.

➢ Lateral Recumbent

A side-lying position (either left or right) where the knee of one leg is slightly bent.

➢ Sims Position

A side-lying position wherein the patient is lying on his left side, but his right thigh and his right knee is pulled up toward his chest.

➢ Prone

When the patient is lying face down, and flat on his abdomen.

➢ Dorsal Recumbent

When the subject is lying flat on his back, facing up. (also known as supine)

➢ Lithotomy

The patient starts off in the supine position. Then, with the thighs apart, the legs are drawn towards the abdomen.

➢ Fowler

The patient lies supine, but the head part of the bed is raised 18 inches and the patient's knees are elevated.

➢ Trendelenburg

A position in which the subject is lying on his back, with the legs at a higher level than the head..

Body Regions

To most patients, a tummy ache is a tummy ache. However, if a patient can provide the healthcare professional with information as to which specific part of the abdomen is in pain, s/he can have an idea as to which internal body organs may be involved.

To make diagnoses easier and more accurate, the abdominal area is divided into four separate regions.

The Four Regions of the Abdomen

➢ RUQ

This is the right upper quadrant. In it, you'll find the right lobe of your liver along with your gallbladder, a portion of the small intestine, and a portion of the large intestine.

➢ LUQ

The left upper quadrant of the abdomen houses the stomach. It also contains the left lobe of your liver. In it, you'll find vital organs such as the pancreas and the spleen. It also contains portions of the small intestine and part of the large intestine.

➢ RLQ

In the right lower quadrant, you'll find the appendix. It also contains areas of the small and the large intestines. At the same time, it holds the right side of the ureter. In females, it houses the right ovary and the right fallopian tube.

➢ LLQ

Accordingly, the left lower quadrant contains the left ovary and the left fallopian tube in females. It also holds the left ureter. Moreover, it contains portions of the small intestine and parts of the large intestine.

The Nine Regions

The abdominal-pelvic areas are further divided into nine subdivisions.

Region	Location	Body organs
Region I **Right Hypochondriac Region**	found in the upper right part of the abdomen, specifically underneath the lower rib cartilage	the gallbladder the liver's right lo
Region II **Epigastric Region**	situated in the middle of the two hypochondriac regions, specifically in the superior part of the abdomen and below the lower rib cartilage	some of the right of the liver, some left lobe of the liv huge portion of th stomach
Region III **Left Hypochondriac Region**	in the upper left part of the abdomen, specifically under the lower rib cartilage	a tiny part of the stomach, some pa the large intestine
Region IV **Right Lumbar Region**	found in the abdomen's mid-section, under Region I	parts of the large intestine, parts of small intestine
Region V **Umbilical Region**	in the abdomen's mid-section, specifically in the middle of the two lumbar regions, under Region II	some of the trans colon, some of th intestine
Region VI **Left Lumbar Region**	situated in the mid-left abdominal area, under Region III	some of the small intestine, a portio the colon
Region VII **Right Inguinal Region / Right Iliac Region**	lower right part of the abdomen, under Region	some of the small intestine, the cecu

	IV	
Region VIII **Hypogastric Region**	mid-lower part of the abdomen, under Region V	the urinary bladde appendix, part of small intestine
Region IX **Left Inguinal Region/ Left Iliac Region**	found in the lower left abdominal area, below region VI	some of the colon of the small intest

The Five Regions of the Spinal Column

The spinal column is also segmented into five different regions. This table describes these regions, from the top to bottom.

Region	Abbreviation	Vocabulary	Location	Details
Cervical Region	C	Cervic/o = Neck	neck area	this form bones o neck an compos seven vertebra labeled C7
Thoracic Region	T or D	Thorac/o = Chest	in the chest area	This cor the vert the ches region, compos vertebra labeled T12 (or D12) Each of bones is

				connect rib.
Lumbar Region	L	Lumb/o= Loins	found in the flank part, situated between your hip bone and your ribs	compris four ver labeled L5 They ma the mov part of t spine. The vert this regi consider the stro and larg all.
Sacral Region	S	Sacr/o = Sacrum	below the lumbar vertebrae	consists vertebra labeled to S5 As a chi matures bones fu together create o bone, w the sacr
Coccygeal region	Co	Coccyx = tailbone	situated at the lowermost end of the vertebral column	initially of four bones, Co4, wh together adultho

				create o bone

The Smaller Regions Found in the Body

Region	Location
Auricular	situated around the ears
Axillary	the armpits
Buccal	the inner part of the cheeks (facial)
Clavicular	on either side of the breastbone
Infraorbital	located below the eye/s
Infrascapular	The region at the back of the bod below the scapula (shoulder), on eith of the vertebrae.
Interscapular	in the posterior part of the body, be the shoulder blades
Lumbar	The lower part of the back, inferior infrascapular area
Mammary	spans the area all over the breast/s
Mental	around the chin
Orbital	around the eye/s
Pubic	inferior to the pubis
Sacral	over the sacrum

Sternal	over the sternum
Submental	under the chin
Supraclavicular	above the clavicles

Body Cavities

The human body consists of two major cavities, which are then divided into smaller cavities. These are hollow spaces which serve to shelter the internal body organs.

Ventral Cavity

The ventral cavity houses the internal organs located in the anterior part of the body. The following table shows its subdivisions.

Sub-cavity	Vocabulary	Organs
Thoracic Cavity	Thorac/o = Chest	This sub-cavity carri vital organs such as lungs, the heart, an aorta. In this cavity, you'll find the esophagus the trachea.
Abdominal Cavity	Abdomin/o = Abdomen	Vital internal organs contained in this sub cavity are the stoma the intestines, the li and the kidneys. The abdominal cavit contains the spleen, gallbladder, and the pancreas.
Pelvic Cavity	Pelv/i = Pelvis	Contained in this su cavity are the reproductive organs

		It also houses the u bladder.

Dorsal Cavity

This major cavity carries the internal organs found in the posterior side of the body.

Sub-cavity	Vocabulary	Organs
Cranial Cavity	Crani/o = Skull	This sub-cavity cradles brain.
Spinal Cavity	Spin/o = Spine	In this sub-cavity, you'll to locate the spinal cord nerves arising from it.

Body Parts

View these tables to find out which medical terms correspond to specific body parts.

Anterior	
Antebrachial	Forearm
Antecubital	Inner elbow
Axillary	Armpit
Brachial	Arm
Carpal	Wrist
Celi/o	Abdomen
Cephalic	Head
Cranial	Cranium
Crural	Leg
Facial	Face
Frontal	Forehead
Femoral	Thigh
Inguinal	Groin
Mammary	Breast

Ocular	Eye
Oral	Mouth
Palmar	Palm
Patellar	Kneecap
Pedal	Foot
Phalangeal	Fingers/ Toes
Pubic	Pubis
Tarsal	Toes
Thoracic	Chest
Umbilical	Navel

Posterior	
Cervical	Neck
Gluteal	Buttock
Iliac	Hip
Lumbar	the lower part of the back
Occipital	the base of the skull
Parietal	the crown of the head
Popliteal	the back of the knee

Sacral	Sacrum
Scapular	Shoulder
Tarsal	Ankle
Plantar	the sole of the foot

Chapter 10: Terminology of Body Systems

As you've read earlier, one of the most effective techniques in memorizing and decoding medical terms is to group them according to body systems. In this chapter, you'll find the most important root words associated with each major system of the body along with examples of their usage.

The Cardiovascular System			
Root Word	**Meaning**	**Example of the Meaning**	**Meaning of Example**
Angi/ Angio	pertaining to a blood vessel	**Angio**ma	a non-maligna of the blood ve wall
Aort/ Aorto	pertaining to the aorta which is the largest artery in the human body	**Aort**itis	a condition wh aorta is inflam
Arter/ Ateri/ Arterio/ Artero	pertaining to an artery Arteries are the vessels which carry oxygenated blood from the heart.	**Arter**iole	a smaller blood which braches from an artery
Ather/ Athero	pertaining to fatty substance	**Athero**ma	occurs when d fatty matter accumulates in inner layer of t arterial walls

Atri/ Atrio	pertaining to the atrium, which can be either one of the two superior heart chambers	Cavo**atri**al junction	The point whe vena cava and upper wall of t atrium of the h meet
Cardi/ Cardio	pertaining to the heart	**Cardio**logist	a specialist wh focuses on the and the diseas the heart and blood vessels
Hemangi/ Hemangio	pertaining to blood vessels	**Hemangi**oma	an anomalous blood vessels
Pericardi/ Pericardio	pertaining to the pericardium, which is the protective sheath enveloping the heart	**Pericardio**centesis	the aspiration from the perica sac
Phlebo	relating to the veins	**Phlebo**lith	a tiny calcificat inside a vein
Thromb/ Thrombo	pertaining to blood clot	**Thrombo**cytes	blood compon which serve to bleeding throu clotting
Vas/ Vaso	related to blood vessel	**Vaso**depressors	pharmaceutica which decreas pressure by cr relaxing effect blood vessels

The Respiratory System			

Root Word	Meaning	Example of the Meaning	Meaning of Example
Alveol/ Alveolo	pertains to the alveoli, which are air sacs found at the end of the bronchioles	**Alveol**itis	when the alve inflamed
Bronch/ Bronchi/ Broncho/ Bronchio	pertaining to the bronchi, which are the two air passages from the trachea to the lungs	**Broncho**pneumonia	bacterial, viral fungal infectio lungs, originat the bronchi
Capn/ Capno	relating to carbon dioxide	**Capno**meter	a device which to monitor and measure the c dioxide concer of a patient's e air.
Epiglott/ Epiglotto	pertaining to the epiglottis, which is a cartilagenous flap that provides a covering to the larynx during swallowing. This way, the food will not enter the airway.	**Epiglott**itis	when the epig inflamed
Laryng/ Laryngo	Pertaining to the larynx or the voice box	**Laryngo**malacia	the weakening larynx This rare cond occurs in neon
Mediastin/ Mediastino	pertains to the mediastinum which is the	**Mediastin**al Shift	occurs when t organs which

	median part of the thoracic cavity		the mediastinu toward the oth of the thoracic
Nas/ Naso	pertains to the nose	**Naso**labial folds	the clinical ter laugh lines wh from the nose the corner of t mouth
Ox/ Oxi/ Oxo/ Oxy	pertains to oxygen	Pulse **Oxi**meter	a device used monitor and m the oxygen sa of the blood vi indirect metho
Pleur/ Pleuro	pertains to the pleurae which are dual layers of membrane that are located on the outside of the lungs	**Pleur**itis	when the pleu inflamed

The Gastrointestinal System			
Root Word	**Meaning**	**Example of the Meaning**	**Meaning of Example**
Append/ Appendo/ Appendic	pertaining to the appendix	**Appendic**olith	hardened depo the appendices
Bil/ Bili/ Bilo	pertaining to bile, which is the yellow-brownish to green-like fluid that the liver secretes, and	**Bili**ary obstruction	a blockage in t ducts

	keeps in the gallbladder Its purpose is to aid in the digestion of fat.		
Cec/ Ceco	pertains to the cecum, which is a sac located over the large intestine, and joined to the ileum's bottom part. The ileum is the bottommost part of the small intestine.	**Cec**ostomy	a surgical proc which a cathet inserted into t cecum
Dueden/ Duodeno	pertaining to the duodenum, which is the topmost part of the small intestine, where semi-digested food matter mixes with bile and other intestinal juices	**Duoden**itis	when the duoc inflamed
Esophag/ Esophago	relating to the esophagus	**Esophag**eal varices	dilated veins i esophagus
Gastr/ Gastro	pertaining to the stomach	**Gastro**plasty	Surgical proce wherein the si stomach is red to make it sma This procedure as a last resor management c morbid obesity

Sial/ Sialo	pertaining to the saliva	**Sial**adenitis	A condition in the salivary gl inflamed.

The Endocrine System			
Root Word	**Meaning**	**Example of the Meaning**	**Meaning Example**
Aden/ Adeno	gland	**Adeno**pathy	a disease glands
Adren/ Adreno/ Adrenalo	pertains to the hormone-producing adrenal gland	**Adreno**megaly	abnormal overgrowt the adrena
Gluc/ Gluco	related to glucose	**Gluc**agon	a hormone secreted b pancreas, increases glucose le
Glyc/ Glyco	pertains to glycogen, which is a compound used to store glucose. It is kept in the liver, until required for future energy purposes	**Glyco**genesis	the proces wherein gl is convert glycogen

Gonad/ Gonado	pertains to the sex glands	**Gonado**tropin	a hormone responsibl aiding in t growth of (reproduct endocrine which crea cells)
Pancreat/ Pancreato	pertains to the pancreas	**Pancreat**ectomy	the surgic removal o pancreas
Parathyroid/ Parathyroido	pertains to the parathyroid gland, which is responsible for maintaining normal levels of calcium in the blood	Hypo**parathyroid**ism	severely r levels of parathyroi hormone i blood This leads calcium deficiency can in turn abnormal of the mus
Thyr/ Thyro	pertaining to the thyroid gland, which is responsible for regulating the metabolic functions of the body	**Thyro**toxicosis	excessive amounts o thyroid ho

The Integumentary System			

Root Word	Meaning	Example of the Meaning	Meaning of th Example
Adipo	pertaining to fat	**Adipo**sis	disproportionate accumulation of the body, or in a organ.
Derm/ Dermo/ Dermato	relating to the skin	**Dermo**phytosis	when the skin, h nails are infected type of fungus th thrives in dead k
Hidr/ Hidro	pertaining to sweat	**Hidro**cystomas	cystic growths in apocrine sweat g
Kerat/ Kerato	scaly tissue	**Kerat**osis	skin lesion, in wh there is a coatin scaly tissue on th surface.
Lip/ Lipo	fatty	**Lipo**suction	the surgical rem unwanted exces inserting tubes b the skin
Melan/ Melano	black	**Melano**ma	A pigmented tum containing melan
Myc/ Myco	concerning fungi	**Myco**sis	any infection wit fungus as a caus agent eg. candidiasis
Onych	nail	**Onycho**mycosis	when the nails a infected by fung
Seb/ Sebo	pertaining to the sebum or to the	**Sebo**rrhea	a condition when is an abnormally

	sebaceous glands		sebum productio to overactive seb glands
Steat	pertaining to fat	**Steat**itis	when the fatty t are inflamed
Trich/ Tricho	related to hair	**Tricho**mycosis	infected conditio hair shaft, cause fungi.

The Musculoskeletal System			
Root Word	**Meaning**	**Example of the Meaning**	**Meaning of Example**
Humer/ Humero	pertaining to the humerus	**Humero**ulnar joint	It is a joint in t consisting of th humerus and t bones.
Ili/ Ilio	relating to the ilium	**Ilio**femoral	concerning the and the femur
Ischi/ Ischio	pertaining to the ischium	**Ischio**rectal abscess	an abscess cre the accumulati pus between t rectum and th ischium
Kyph/ Kypho	bent	**Kypho**sis	when the spin curved outwar as in hunchbac
Lamin/ Lamino	pertaining to the lamina (thin, flat area on either side of the vertebra's arch)	**Lamino**plasty	an operative procedure don relieve the pre off the spinal c order to treat s

			stenosis
Leiomy/ Leiomyo	smooth muscle	**Leiomyo**ma	a smooth mus tumor, that is malignant
Lumbo	referring to the five vertebrae located on the lower back	**Lumbo**tomy	when the kidn excised from t
Maxill/ Maxillo	pertaining to the upper jaw	**Maxillo**lacrimal	concerning the and the lacrim
My/ Myo	muscle	**Myo**sitis	when the mus tissue is severe inflamed, and degeneration
Oste/ Osteo	relating to the bone	**Oseteo**arhtiritis	arthritis which due to the wea cartilage, caus bones to rub a each other. This is typicall accompanied b in the bone an joint.
Scolio	curved	**Scolio**sis	a condition wh the spine is abnormally cu sideways
Spondyl/ Spondylo	pertaining to the vertebra	**Spondyl**itis	when the verte inflamed
Synov/ Synovo	relating to the synovial membrane, which is a connective tissue	**Synov**itis	when the syno membrane of t is inflamed

	that lines the joint cavities This produces synovial fluid, which provides lubrication to joints.		

The Nervous System			
Root Word	**Meaning**	**Example of the Meaning**	**Meaning of Example**
Cerebell/ Cerebello	pertains to the cerebellum, the major brain division that governs musculoskeletal movement	**Cerebell**itis	the inflamed s the cerebellum
Cerebr/ Cerebro/ Cerebri	pertains to the cerebrum, the major part of the brain that governs feelings, behavior, memory, and thoughts	**Cerebr**algia	pain in the hea mainly associa the meninges
Crani/ Caranio	pertaining to the cranium	**Cranio**tomy	a hole that is r surgically in th
Mening/ Meningo/ Meningio	concerning the meninges	**Meningio**ma	a tumor, usual malignant, tha in the brain's meningeal tiss
Neur/ Neuri/ Neuro	relating to a nerve	**Neuro**transmitters	chemicals that the transition signals from o

			cell to another

The Sensory System			
Root Word	**Meaning**	**Example of the Meaning**	**Meaning of t Example**
Audi/ Audio	pertains to hearing	**Audio**metry	the measureme an individual's s of hearing, both terms of sensiti and range
Cochle /Cochleo	pertaining to the cochlea of the ear	**Cochle**ostomy	a surgical proce wherein an ope is made in the c
Conjunctiv/ Conjunctivo	referring to the conjunctiva of the eye	**Conjunctiv**itis	when the muco membrane that the eyelid (conjunctiva) is inflamed
Cor/ Core/ Coreo/ Coro	pertaining to the pupil of the eye	**Coreo**plasty	corrective surgi procedure to fix shape or the siz the pupil
Corne	relating to the cornea, the transparent front part of the eyeball which bends light	**Corne**al abrasion	a scratch in the layer of the cor
Cycl/ Cyclo	pertaining to the ciliary body of the eye	**Cyclo**tropia	a kind of strabis (clinical term fo cross-eye)
Dacry/	tears	**Dacryo**cystitis	infected lacrima

Dacryo			
Larcrim/ Lacrimo	tears	**Lacrim**otomy	a surgical incisio made into the la duct. The lacrimal gla work to keep th moist. They are responsible for t production of te
Scler/ Sclero	pertaining to the white of the eye	**Scler**astasia	protrusion of th sclera

The Urinary System			
Root Word	**Meaning**	**Example of the Meaning**	**Meaning of th Example**
Cyst/ Cysto	concerns the bladder, the organ where urine is collected prior to its excretion from the body	**Cysto**pexy	a surgical proced wherein the urin bladder is attach the abdominal w to other adjacen structures
Glomerul/ Glomerulo	pertaining to the glomerulus These are a group of capillaries found in the functional part of the kidney (the nephron).	**Glomerulo**nephritis	condition where glomeruli are inf

Meat/ Meato	pertaining to a meatus (an external opening, eg. the urethra)	**Meat**otomy	pertains to a sur procedure where meatus is enlarg
Nephr/ Nephro	refers to the kidneys	**Nephro**calcinosis	a condition wher calcium salts are deposited in the parenchyma. This is one of th many undesirabl consequences of hyperparathyroi
Pyel/ Pyelo	pertains to the renal pelvis (area in the center of the kidney where urine is collected)	**Pyelo**gram	an X-ray inspect the kidneys, the bladder, and the ureters with the a contrast mediu introduced into v
Ren/ Reno	concerning the kidneys	**Reno**megaly	abnormal overgr of the kidney
Ureter/ Uretero	pertains to the ureter, which is either one of the two ducts that transport urine from the kidney towards the urinary bladder	**Ureter**ostomy	a surgical proced wherein an oper created within th ureter, so that th flow of the urine be diverted awa the bladder This is done in th case of a dysfun or surgically exci bladder.
Urethr/ Urethro	relating to the urethra, the conduit through which urine is	**Urethr**ostomy	the surgical crea a permanent op in the urethra, f purpose of remo

	transported from the bladder to be eliminated from the body		stones or other structures that a blocking the flow urine

The Female Reproductive System			
Root Word	**Meaning**	**Example of the Meaning**	**Meaning of Example**
Cervic/o	referring to the cervix	**Cervic**itis	when the cerv inflamed
Colp/ Colpo	pertaining to the vagina	**Colpo**rrhagia	excessive vagi bleeding
Galact/ Galacto	milk	**Galacto**cele	a cyst in the mammary glar contains milk
Gynec/ Gyneco	concerns the female reproductive parts	**Gynec**oid pelvis	the normal sha the female pel
Hyster/ Hystero	pertaining to the uterus	**Hystero**salpingogram	an X-ray exam performed to determine the (freedom from obstruction) o fallopian tubes
Lact/ Lacto	involving milk	**Lacto**genic	a substance, s drug or a horm which triggers production
Oo	egg	**Oo**genesis	refers to the p by which the c forms, develop reaches matur

Oophor	pertaining to the ovaries	**Oophor**itis	when the ovar inflamed
Ovari/ Ovario	involving the ovaries	**Ovario**hysterectomy	the surgical ex the ovaries, al the uterus
Perine/ Perineo	relates to the perineum, which is the space that separates the labia majora from the anus	**Perineo**meter	a device used measure the s of the muscula contractions o pelvic floor
Vulv/ Vulvo	pertains to the vulva	**Vulv**itis	when the vulv inflamed

The Male Reproductive System			
Root Word	**Meaning**	**Example of the Meaning**	**Meaning of t Example**
Andro	relates to males	**Andro**gen	a hormone whic triggers and mai male characteris
Balan/ Balano	pertains to the head of the penis (glans penis)	**Balano**posthitis	the inflammatio the head of the and the foreskin
Epididym/ Epididymo	relates to the epididymis, which are clusters of sperm-storing ducts, located over the testes	**Epididymo**vasostomy	a surgical proce wherein a disconnected va deferens is conn to the epididymi The vas deferen to a slender tub where sperm is transported from

			epididymis to th urethra.
Orch/ Orchi/ Orchid/ Orchio	pertains to the testes	**Orchid**ectomy	a surgical proce which the testes removed
Prostat/ Prostato	involves the prostate gland	**Prostat**itis	inflamed conditi the prostate
Sperm/ Spermo/ Spermato	concerning sperm	A**sperm**ia	a condition whe the male is unab produce semen

Chapter 11: Answers

This section contains answers to exercises from the previous chapters.

Answers to Chapter 3

1. laryng
2. neur
3. oste
4. cardia
5. encephal
6. peri - itis
7. pathy
8. electro - gram
9. hyper - emia
10. rhin
11. bone
12. hypotension
13. true
14. false
15. Colonoscopy

Answers to Chapter 4

1. j
2. guy
3. j
4. f
5. k
6. sk
7. k

8. f
9. e
10. new
11. e
12. see
13. si
14. f
15. thee

Answers to Chapter 6

1. condition of urine
2. starch
3. away from
4. gray
5. resembling
6. tumor
7. new
8. stupor
9. presence of stones
10. half
11. ear
12. spleen
13. pregnancy
14. green
15. backward

Good Job!

Download the 'Additional Questions' ebook to receive even more exercises with answers!

You can find it **HERE**

Chapter 12: Tips and Additional Resources

Every week, millions of viewers tune in to television shows about doctors, and delight at the medical language onscreen "doctors" use. Fans pick up bits and pieces of medical terms and assume they're now wise and knowledgeable about medical language. It's fun, but in truth, knowing and memorizing medical terms is not easy. There are millions of words to know and remember. Knowing where words came from and how they were formed is key. While everybody is not in the medical profession, and may not view medical-related shows, it is important to have at least a basic knowledge of medical terminology.

A. Tips

Here are some tips to help learners understand, pronounce, and memorize medical terms:

1. Build good study habits by taking down notes during class/training (when needed – it is still important to listen to instructors/teachers/professors), organizing notes on lessons, and reading lessons regularly.
2. Rest when needed. Make sure to get enough rest because the human brain needs rest, too.
3. Create a schedule for studying. Choosing a specific time to study each day prevents cramming.
4. Ask for help when necessary, especially about lessons or medical terms that are really hard to understand. Classmates, professors, teachers, or instructors can always be approached for help.
5. Take practice tests or quizzes online. Many of them are interactive which takes boredom out of studying.
6. Play word games using flashcards, or other tools such as phone apps, or online interactive tools.
7. Aside from visual cues, learners can use other words that can be associated with medical terms. This is

easier by using one's own words to describe a particular medical term. For example, inflammation of the nose is rhinitis. It can be associated with the word rhino.

A. Additional Resources

There are also other additional resources that can be used when studying medical terms, as follows:

1. Guides and Workbooks

Guides and workbooks are good alternatives to heavy medical dictionaries and books. The same information is provided when exploring them, but these are easier to understand, and are available in shorter versions. For instance, books that were written and developed to help learners understand medical terms and make them memorize words effectively.

Here are some of the best guides and workbooks for memorizing medical terms:

Medical Terminology: A Living Language

This book features a lot of medical information that are delivered for easy reading. It doesn't contain boring topics, usually seen in medical books. It also features up-to-date medical terms that were meticulously selected and cataloged. This book was written by Suzanne Frucht and Bonnie Fremgen.

Quick Medical Terminology: A Self-Teaching Guide

According to the authors, this book provides necessary tools for building and maintaining a large working knowledge of medical terms. They include a number of practice exercises, quizzes, and real examples to help learners develop and train their memory. This book

was written by Shirley Steiner and Natalie Capps.

2. Online Practice Quizzes

There are also a number of practice quizzes that are available online. Even some of the phone apps mentioned in Chapter 4 have their own online versions of their practice quizzes. These are fun to use because many of them are interactive. Some of the recommended online practice quizzes include:

Sporacle

This features a section dedicated to teaching medical terms, including hundreds of basic and complicated words. It offers addictive quizzes and timed exercises to keep learners interested.

ProProfs Quiz

This site also includes a section of quizzes that are related to medical terms and topics. It offers long quizzes with hundreds of questions.

3. Online Flashcards and Other Tools

Aside from quizzes and phone apps, there are also flashcards available online, that include games, exercises, and guides on how to create homemade flashcards. Some of the best online flashcards available are:

- StudyBlue
- Quizlet
- StudyStack
- Flashcard Machine

4. **Free Online Classes**

Lastly, there are online courses for learning medical terminology that are available for free. Anybody studying in medical training institutes or schools can still benefit from additional courses. They can add what they've learned from online classes to their knowledge base. Here are a few online programs that can be taken for free:

Medical Terminology Course

Provided by Des Moines University

This online course is divided into sections, and in each one are lessons containing practical and useful examples. Each lesson also includes additional information about topics being discussed, and there are quizzes and exercises at the end. Explanations are provided in an easy and light language and tone, which makes this online course easy to understand.

Medical Terminology

Provided by SweetHaven Publishing Services

This online class presents its lessons using flashcards. The class is divided into different modules that can be studied in a random order. Learners can pick any topic and work from there, which makes this online class perfect for busy medicals students, healthcare workers, and hospital personnel.

Understanding Medical Words

Supported by the National Library of Medicine

This online course can work even without Internet connection. It can be downloaded, so learners can review lessons offline. It offers a comprehensive list of medical terms with explanations and definitions. It also includes abbreviations most commonly used in the medical field. What's more, medical terms are broken down to their Latin and Greek roots. The course also provides examples with accompanying visuals.

These are just a few of many resources that can be added to a

learner’s arsenal of study tools. Now it’s time to go and study.

JOIN OUR COMMUNITY

Medical Creations is an educational company focused on providing study tools for Healthcare students.

We want to be as close as possible to our customers, that's why we are active on all the main Social Media platforms.

You can find us here:

Facebook **www.facebook.com/medicalcreations**

Instagram **www.instagram.com/medicalcreationsofficial**

Twitter **www.twitter.com/medicalcreation** (no 's')

Pinterest **www.pinterest.com/medicalcreations**

Conclusion

Thank you again for downloading this ebook!

I hope this ebook was able to help you to better understand, memorize, and pronounce medical terms. The next step is to use the methods and tips provided here.

Finally, if you enjoyed this ebook, then I'd like to ask you for a favor, would you be kind enough to leave a review for this book on Amazon? It would be greatly appreciated!

Thank you and good luck with your studies!